Rep30

From: Wolf, Jimmy
Sent: Thursday, March 16, 2017 11:49 AM
To: Elizabeth Cassell
Subject: Amendments
Attachments: ZEN amendment - effect of sale of zero-emissions nuclear resource.docx; ZEN amendment 6 - Limit filing to qualify as ZEN resource.docx; ZEN amendment 5 - Commitments maintained on sale.docx; ZEN amendment 3 - Corporate headquarters.docx; ZEN amendment - 16-year program.docx; ZEN amendment - 6-11 year review by PUCO incl federal law impact.docx; ZEN amendment - employment levels (similarly-situated defined).docx; ZEN amendment 4 - Retail rate vs June 2015 and deferral.docx

Good Morning Liz,

Attached are copies of amendments that First Energy sent to our office based on the list Representative Seitz sent over to your office last Thursday. Also, Representative Seitz was wondering if Senator Eklund would be available to join him and Ty Pine for a phone call about these draft amendments tomorrow at 3 PM?

Best,

Jimmy Wolf
Legislative Aide to Representative Bill Seitz
30th House District
614.466.8258
Jimmy.wolf@ohiohouse.gov

AM

.B.

As Reported by _____

Topic: Zero-Emissions Nuclear Resource Program; effect of sale of zero-emissions nuclear resource

_____ moved to amend as follows:

In line 258, delete "All" and insert "(A) Except as provided in division (B) of this section, all"

Between lines 269-270, insert:

(B) If the owner as of December 31, 2016 of a zero-emissions nuclear resource sells or transfers the zero-emissions nuclear resource, the public utilities commission shall reduce the number of zero-emissions nuclear credits to be purchased from that resource during the program period and, if necessary, successive program periods to reflect an adjustment equal to one-half of the dollar amount of any net proceeds available after the payment or provision for the seller's known obligations, but in no instance shall this adjustment apply to a sale or transfer under the United States Bankruptcy Code, including, but not limited to, sections 363 and 1123, 11 U.S.C. §§ 363 and 1123.

The motion was agreed to.

AM

As Reported by .B.

Topic: Zero-Emissions Nuclear Resource Program; period to file as zero-emissions nuclear resource

_____ moved to amend as follows:

In line 124, after "period" delete the remainder of the sentence through the end of line 125.

Delete lines 195-200

In line 206, after "resource." insert "The nuclear energy resource shall submit an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code."

The motion was agreed to.

AM

As Reported by .B.

Topic: Zero-Emissions Nuclear Resource Program; provisions apply upon sale

_____ moved to amend as follows:

At the end of line 215, insert "The provisions of sections 4928.75 through 4928.753x shall apply to any person to which zero-emissions nuclear resources are sold, assigned, transferred, or conveyed."

The motion was agreed to.

AM

.B.

As Reported by _____

Topic: Zero-Emissions Nuclear Resource Program; corporate headquarters

_____ moved to amend as follows:

Between lines 287 and 288, insert:

"**Sec. 4928.7533.** During each program period in which a zero-emissions nuclear resource receives payment for credits under section 4928.7526 of the Revised Code, an entity that owns or operates that zero-emissions nuclear resource and that has its corporate headquarters located in Ohio shall continue to maintain its corporate headquarters in Ohio.

The motion was agreed to.

AM

As Reported by .B.

Topic: Zero-Emissions Nuclear Resource Program; length of program

_____ moved to amend as follows:

In line 116, after "section" insert "and terminating on the last day of the eighth program period"

The motion was agreed to.

AM

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As Reported by _____

Topic: Zero-Emissions Nuclear Resource Program; five-year review by Public Utilities Commission of Ohio

_____ moved to amend as follows:

Between lines 297 and 298 insert:

"Sec. 4928.7533. During the sixth and eleventh years of the zero-emissions nuclear resource program, the Public Utilities Commission shall evaluate the price of the zero-emissions nuclear credit established under section 4928.7520 of the Revised Code for the purpose of discerning whether the program is achieving the policy goals in section 4928.751 of the Revised Code and whether those policy goals are being met through other federal environmental laws, programs, rules or regulations or through amendments to the federal tax code. Upon the conclusion of its evaluation, the commission shall report the results of its evaluation to the standing committees of both houses of the general assembly that have primary jurisdiction regarding public utility legislation. In no case shall the zero-emissions nuclear resource program terminate earlier than the last day of the second program period.

In line 7 of the title, delete "and"

In line 7 of the title, after "4928.7532" insert ", and 4928.7533"

The motion was agreed to.

AM

As Reported by .B.

Topic: Zero-Emissions Nuclear Resource Program; employment levels

_____ moved to amend as follows:

Between lines 287 and 288, insert:

"Sec. 4928.7533. (A) For purposes of this section:

(1) "Employment levels" means the number of full-time employees regularly providing services at the location of a zero-emissions nuclear resource.

(2) "Full-time employee" means an individual who is employed for consideration for at least thirty-five hours per week, or who renders any other standard of service generally accepted by custom or specified by contract as full-time employment.

(B) During each program period in which a zero-emissions nuclear resource receives payment for zero-emissions nuclear credits under section 4928.7526 of the Revised Code, the employment levels at that zero-emissions nuclear resource shall continue to be similar to that of nuclear energy resources constructed prior to 1990 in the United States with the same reactor type, similar nameplate capacity and single-unit location.

The motion was agreed to.

AM

As Reported by .B.

Topic: Zero-Emissions Nuclear Resource Program; retail rate deferral

_____ moved to amend as follows:

At the end of line 287, insert "The nonbypassble charge shall be designed such that no retail electric service customer shall have an increase resulting from the nonbypassable rider in its total retail electric service bill of more than five percent as compared to June 2015. The participating electric distribution utility shall defer as a regulatory asset an amount equal to the revenue reduction resulting from the five percent limit on customer bill increases and recover the deferral plus carrying charges through a nonbypassable charge assessed over a twelve-month period."

The motion was agreed to.

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(B) During each program period in which a zero-emissions nuclear resource receives payment for zero-emissions nuclear credits under section 4928.7526 of the Revised Code, the employment levels at that zero-emissions nuclear resource shall continue to be similar to that of nuclear energy resources constructed prior to 1990 in the United States with the same reactor type, similar nameplate capacity and single-unit location.

The motion was agreed to.

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Between lines 287 and 288, insert:

"**Sec. 4928.7533.** During each program period in which a zero-emissions nuclear resource receives payment for credits under section 4928.7526 of the Revised Code, an entity that owns or operates that zero-emissions nuclear resource and that has its corporate headquarters located in Ohio shall continue to maintain its corporate headquarters in Ohio.

The motion was agreed to.

Rep30

From: Pine, Ty <tpine@firstenergycorp.com>
Sent: Friday, March 17, 2017 8:32 AM
To: Rep30; John Eklund - Calfee, Halter & Griswold LLP (JEklund@Calfee.com); Seitz, William
Subject: FW: ZEN Amendments
Attachments: ZEN amendment - 16-year program.docx; ZEN amendment - employment levels (similarly-situated defined).docx; ZEN amendment 3 - Corporate headquarters.docx; ZEN amendment 6 - Limit filing to qualify as ZEN resource.docx; ZEN amendment - 6-11 year review by PUCO incl federal law impact.docx; ZEN amendment 4 - Retail rate vs June 2015 and deferral.docx; ZEN amendment 5 - Commitments maintained on sale.docx; ZEN amendment - effect of sale of zero-emissions nuclear resource.docx; FE Comments to LSC 3 3 17 Draft - 3 6 17.docx

Gentlemen,

So we are working with the same set of amendments, below are all of the amendments we submitted for your consideration. Note that some of these have been altered from the ones submitted last Friday, while others are new.

Mike Dowling, Joel Bailey and some technical folks will join us for our call at 3PM so that we are able to address any questions that arise. As you know, we are very eager to get a bill introduced next week.

Thanks.

From: Bingaman, Bradley A
Sent: Thursday, March 16, 2017 5:09 PM
To: Pine, Ty <tpine@firstenergycorp.com>
Subject: ZEN Amendments

Ty,
Not sure if this will work on receipt but I tried to add the attachments to the body of the email rather than the message bar above.

- 16 year program

- Commission review

- Employment levels

- Rate impact

- Headquarters

- Commitments maintained on sale

- One time ZEN designation

- Effect of Sale

- FE Recent edits to LSC draft re environmental requirements

Bradley A. Bingaman | Associate General Counsel | FirstEnergy
(330) 384-5947 | bbingaman@firstenergycorp.com

Rep30

From: Rep30
Sent: Friday, March 17, 2017 8:52 AM
To: 'Seitz, William'
Subject: FW: ZEN Amendments
Attachments: ZEN amendment - 16-year program.docx; ZEN amendment - employment levels (similarly-situated defined).docx; ZEN amendment 3 - Corporate headquarters.docx; ZEN amendment 6 - Limit filing to qualify as ZEN resource.docx; ZEN amendment - 6-11 year review by PUCO incl federal law impact.docx; ZEN amendment 4 - Retail rate vs June 2015 and deferral.docx; ZEN amendment 5 - Commitments maintained on sale.docx; ZEN amendment - effect of sale of zero-emissions nuclear resource.docx; FE Comments to LSC 3 3 17 Draft - 3 6 17.docx

See enclosed from Ty Pine.

From: Pine, Ty [mailto:tpine@firstenergycorp.com]
Sent: Friday, March 17, 2017 8:32 AM
To: Rep30 <Rep30@ohiohouse.gov>; John Eklund - Calfee, Halter & Griswold LLP (JEklund@Calfee.com) <JEklund@Calfee.com>; Seitz, William <william.seitz@dinsmore.com>
Subject: FW: ZEN Amendments

Gentlemen,

So we are working with the same set of amendments, below are all of the amendments we submitted for your consideration. Note that some of these have been altered from the ones submitted last Friday, while others are new.

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- Effect of Sale

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Bradley A. Bingaman | Associate General Counsel | FirstEnergy
(330) 384-5947 | bbingaman@firstenergycorp.com

Wolf, Jimmy

From: Wolf, Jimmy
Sent: Friday, March 17, 2017 9:48 AM
To: Brian Malachowsky
Subject: ZEN Sub Bill
Attachments: ZEN amendment - 16-year program.docx; ZEN amendment - employment levels (similarly-situated defined).docx; ZEN amendment 3 - Corporate headquarters.docx; ZEN amendment 6 - Limit filing to qualify as ZEN resource.docx; ZEN amendment - 6-11 year review by PUCO incl federal law impact.docx; ZEN amendment 4 - Retail rate vs June 2015 and deferral.docx; ZEN amendment 5 - Commitments maintained on sale.docx; ZEN amendment - effect of sale of zero-emissions nuclear resource.docx

Brian,

I apologize for this, but could you please disregard the amendments I sent to you yesterday and use these attached to draft a -2 verision of the ZEN bill you have been working on?

If you have any questions, please feel free to contact me.

Best,

Jimmy Wolf
Legislative Aide to Representative Bill Seitz
30th House District
614.466.8258
Jimmy.wolf@ohiohouse.gov

AM

.B.

As Reported by _____

Topic: Zero-Emissions Nuclear Resource Program; period to file as zero-emissions nuclear resource

_____ moved to amend as follows:

In line 124, after "period" delete the remainder of the sentence through the end of line 125.

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In line 206, after "resource." insert "The nuclear energy resource shall submit an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code."

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Between lines 297 and 298 insert:

"Sec. 4928.7533. During the sixth and eleventh years of the zero-emissions nuclear resource program, the Public Utilities Commission shall evaluate the price of the zero-emissions nuclear credit established under section 4928.7520 of the Revised Code for the purpose of discerning whether the program is achieving the policy goals in section 4928.751 of the Revised Code and whether those policy goals are being met through other federal environmental laws, programs, rules or regulations or through amendments to the federal tax code. Upon the conclusion of its evaluation, the commission shall report the results of its evaluation to the standing committees of both houses of the general assembly that have primary jurisdiction regarding public utility legislation. In no case shall the zero-emissions nuclear resource program terminate earlier than the last day of the second program period.

In line 7 of the title, delete "and"

In line 7 of the title, after "4928.7532" insert ", and 4928.7533"

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At the end of line 215, insert "The provisions of sections 4928.75 through 4928.753x shall apply to any person to which zero-emissions nuclear resources are sold, assigned, transferred, or conveyed."

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In line 258, delete "All" and insert "(A) Except as provided in division (B) of this section, all"

Between lines 269-270, insert:

(B) If the owner as of December 31, 2016 of a zero-emissions nuclear resource sells or transfers the zero-emissions nuclear resource, the public utilities commission shall reduce the number of zero-emissions nuclear credits to be purchased from that resource during the program period and, if necessary, successive program periods to reflect an adjustment equal to one-half of the dollar amount of any net proceeds available after the payment or provision for the seller's known obligations, but in no instance shall this adjustment apply to a sale or transfer under the United States Bankruptcy Code, including, but not limited to, sections 363 and 1123, 11 U.S.C. §§ 363 and 1123.

The motion was agreed to.

Reviewed As To Form By
Legislative Service Commission

I_132_0723-1

132nd General Assembly
Regular Session **. B. No.**
2017-2018

A B I L L

To amend section 4928.02 and to enact sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532 of the Revised Code regarding the zero-emissions nuclear resource program.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 4928.02 be amended and sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532 of the Revised Code be enacted to read as follows:

Sec. 4928.02. It is the policy of this state to do the following throughout this state:

(A) Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service;

(B) Ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs;

(C) Ensure diversity of ~~electricity~~ the following:

(1) Electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities;

(2) Resources, including zero-emissions nuclear resources as defined in section 4928.75 of the Revised Code, that provide fuel diversity and environmental and other benefits.

(D) Encourage innovation and market access for cost-effective supply- and demand-side retail electric service including, but not limited to, demand-side management, time-differentiated pricing, waste energy recovery systems, smart grid programs, and implementation of advanced metering infrastructure;

(E) Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service and the development of performance standards and targets for service quality for all consumers, including annual achievement reports written in plain language;

(F) Ensure that an electric utility's transmission and

distribution systems are available to a customer-generator or owner of distributed generation, so that the customer-generator or owner can market and deliver the electricity it produces;

(G) Recognize the continuing emergence of competitive electricity markets through the development and implementation of flexible regulatory treatment, while simultaneously recognizing the need for nuclear energy resources, as defined in section 4928.75 of the Revised Code, and resources that provide fuel diversity and environmental and other benefits;

(H) Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates;

(I) Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power;

(J) Provide coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates;

(K) Encourage implementation of distributed generation across customer classes through regular review and updating of administrative rules governing critical issues such as, but not limited to, interconnection standards, standby charges, and net metering;

(L) Protect at-risk populations, including, but not limited to, when considering the implementation of any new

advanced energy or renewable energy resource;

(M) Encourage the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs and alternative energy resources in their businesses;

(N) Facilitate the state's effectiveness in the global economy.

In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state.

Sec. 4928.75. As used in sections 4928.75 to 4928.7532 of the Revised Code:

(A) "Nuclear energy resource" means an electric generation unit fueled, in whole or in part, by nuclear power and licensed by the nuclear regulatory commission.

(B) "PJM" means the PJM Interconnection, L.L.C., or its successor.

(C) "Zero-emissions nuclear credit" means the attributes associated with one megawatt hour of electricity generated by a zero-emissions nuclear resource.

(D) "Zero-emissions nuclear resource" means a nuclear energy resource that meets the criteria of section 4928.754 of the Revised Code.

Sec. 4928.751. There is hereby created a zero-emissions nuclear resource program to enable the state to meet its policy goals and requirements under which zero-emissions nuclear credits are purchased by electric distribution utilities to

provide long-term energy security and environmental and other benefits to the region and to retail electric service customers in the state. An electric distribution utility in this state that has a zero-emissions nuclear resource located within its certified territory shall participate in the program. All electric distribution utilities in the same holding company system shall participate jointly and shall allocate costs across all classes of each participating utility's customers.

Sec. 4928.752. The zero-emissions nuclear resource program shall operate for successive two-year program periods beginning with the initial program period commencing on the effective date of this section.

Sec. 4928.753. To provide zero-emissions nuclear credits under the zero-emissions nuclear program, an entity that owns or operates a nuclear energy resource shall file with the public utilities commission a written notice verifying that the resource meets the criteria under section 4928.754 of the Revised Code. The entity shall file the written notice not later than ninety days after the commencement of the initial program period or, if the resource has not yet qualified, not later than prior to the commencement of a subsequent program period.

Sec. 4928.754. A nuclear energy resource that satisfies all of the following criteria is a zero-emissions nuclear resource for purposes of zero-emissions nuclear credits:

(A) The resource is interconnected within the transmission system of PJM.

(B) PJM has determined the resource is transmission deliverable under the metrics by which PJM calculates deliverability for purposes of capacity planning on a round-the-

clock baseload basis into the transmission zone or zones of electric distribution utilities participating in the zero-emissions nuclear resource program under sections 4928.75 to 4928.7532 of the Revised Code.

(C)(1) For in-state nuclear energy resources:

(a) The resource has benefited the air quality profile of the state more than the predominant electric generation source with similar capacity and baseload characteristics as the resource as of the time the resource commenced operation.

(b) All of the following could occur if the resource ceased operation and its capacity were replaced at the same location by the then predominant electric generation source with similar capacity and baseload characteristics as the resource:

(i) The ability of the state, or region of the state, to maintain or decrease existing ~~intensity~~ levels of ~~fine particulate matter~~ volatile organic compounds or to comply with one or more state or federal air pollution control programs, standards, or goals is reduced.

(ii) The carbon dioxide emissions intensity of the state is negatively impacted.

(iii) The ability of the state to maintain or decrease existing ~~intensity~~ levels of carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen oxide, or sulfur dioxide is negatively impacted.

(2) For all other nuclear energy resources, each such resource is shown to provide no less than the same level of environmental benefits to the state as nuclear energy resources located within the state, pursuant to the requirements in division (C)(1) of this section.

(D) The resource, on or after January 1, 2017:

(1) Did not receive from another state tax exemptions, deferrals, exclusions, allowances, payments, credits, deductions, or reimbursements calculated in whole or in part using a metric that provides value for emissions not produced by the resource;

(2) Is not wholly owned by a municipal or cooperative corporation or a group, association, or consortium of those corporations; or

(3) Did not, during a program period described in section 4928.752 of the Revised Code, recover some or all of the capital or operating costs of the resource through rates regulated by a state.

Sec. 4928.755. With respect to a written notice filed under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, any interested person may file comments with the public utilities commission not later than twenty days after the written notice was filed.

Sec. 4928.756. An entity that owns or operates a nuclear energy resource may file with the public utilities commission a response to any comment made under section 4928.755 of the Revised Code, not later than ten days after the comment was filed.

Sec. 4928.757. Not later than fifty days after the filing of a written notice under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, the public utilities commission shall designate a resource that satisfies the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource and issue an order

consistent with that designation. If the commission does not issue an order in the time required by this section, the resource shall be deemed to be a zero-emissions nuclear resource.

Sec. 4928.7510. With respect to a written notice filed under section 4928.753 of the Revised Code relating to a nuclear energy resource described in division (C)(2) of section 4928.754 of the Revised Code, the resource shall submit with its written notice an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code.

Sec. 4928.7511. The public utilities commission, under a procedure it adopts, shall determine and issue the appropriate order regarding whether a nuclear energy resource described in division (C)(2) of section 4928.754 of the Revised Code satisfies the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource. At minimum, the adopted procedure shall provide the opportunity for comment and response similar to the opportunities described under sections 4928.755 and 4928.756 of the Revised Code.

Sec. 4928.7513. A nuclear energy resource determined under section 4928.757 or 4928.7511 of the Revised Code to be a zero-emissions nuclear resource shall continue to be considered such a resource for all successive program periods as long as the resource continues to meet the criteria of divisions (A), (B), and (D) of section 4928.754 of the Revised Code.

Sec. 4928.7514. Zero-emission nuclear resources shall provide zero-emissions nuclear credits for the zero-emissions nuclear resource program. Not later than thirty days before a program period commences, each zero-emissions nuclear resource shall confirm with the public utilities commission its intent to

continue to commit its credits under the program.

Sec. 4928.7515. All financial statements, financial data, and trade secrets submitted to or received by the public utilities commission for purposes of satisfying the criteria as a zero-emissions nuclear resource and any information taken for any purpose from the statements, data, or trade secrets are not public records under section 149.43 of the Revised Code.

Sec. 4928.7520. Not later than sixty days after the initial program period commences and not later than thirty days before a subsequent program period commences, the public utilities commission shall set the price for zero-emissions nuclear credits applicable for the period. For the initial program period the price shall be seventeen dollars per credit. For each subsequent program period, that price shall be adjusted for inflation using the gross domestic product implicit price deflator as published by the United States department of commerce, bureau of economic analysis, index numbers 2007=100.

Sec. 4928.7521. At the same time the public utilities commission sets the price for zero-emissions nuclear credits, the commission shall determine the maximum number of credits to be purchased by electric distribution utilities during the program period. The amount the commission sets shall equal one-third of the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report.

Sec. 4928.7522. Not later than seven days following the close of each quarter of a program period, each zero-emissions nuclear resource shall transfer all of its zero-emissions nuclear credits generated that quarter to the public utilities

commission, which shall hold the credits for the sole purpose of administering the program.

Sec. 4928.7523. Not later than seven days after the zero-emissions nuclear resource transfers its credits, the public utilities commission shall notify each participating electric distribution utility of the total amount of zero-emissions nuclear credits received from zero-emissions nuclear resources.

Sec. 4928.7524. All participating electric distribution utilities shall purchase all zero-emissions nuclear credits transferred to the public utilities commission up to the maximum number of credits determined under section 4928.7521 of the Revised Code. The commission shall allocate the amounts to be purchased by each participating utility based on the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report. Each participating electric distribution utility shall pay the credit price for each credit purchased.

Sec. 4928.7525. The public utilities commission shall deposit all payments for credits into the zero-emissions nuclear resources fund created under section 4928.7532 of the Revised Code.

Sec. 4928.7526. Not later than seven days after receipt of utility payment, the public utilities commission shall pay to each zero-emissions nuclear resource the amount paid for each of the resource's zero-emissions nuclear credits purchased from the zero-emissions nuclear resources fund.

Sec. 4928.7527. Credits purchased by participating

electric distribution utilities may not be transferred, sold, or assigned to any other entity.

Sec. 4928.7530. Each participating electric distribution utility shall recover any and all direct and indirect costs for the purchase of zero-emissions nuclear credits through a nonbypassable rider charged to all of its retail electric service customers, which rider shall be established not later than sixty days after the effective date of this section.

Sec. 4928.7532. There is hereby created the zero-emissions nuclear resources fund that shall be in the custody of the treasurer of state but shall not be part of the state treasury. The fund shall consist of all money collected by the public utilities commission from purchases of zero-emissions nuclear credits. The amounts deposited into the fund shall be used to pay the credit purchase price to the resources that generated the credits. All investment earnings from the fund shall be transferred by the treasurer to the general revenue fund in the state treasury.

Section 2. That existing section 4928.02 of the Revised Code is hereby repealed.

Rep30

From: Rep30
Sent: Tuesday, March 21, 2017 11:21 AM
To: Kasych, Shawn
Subject: ZEN
Attachments: I_132_0723-2.pdf

Please find attached the latest version of the ZEN bill.

Reviewed As To Form By
Legislative Service Commission

I_132_0723-2

132nd General Assembly
Regular Session
2017-2018

. B. No.

A BILL

To amend section 4928.02 and to enact sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, 4928.7532, 4928.7533, 4928.7534, and 4928.7540 of the Revised Code regarding the zero-emissions nuclear resource program.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 4928.02 be amended and sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, 4928.7532, 4928.7533, 4928.7534, and 4928.7540 of the Revised Code be enacted to read as follows:

Sec. 4928.02. It is the policy of this state to do the

following throughout this state:

(A) Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service;

(B) Ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs;

(C) Ensure diversity of ~~electricity~~ the following:

(1) Electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities;

(2) Resources, including zero-emissions nuclear resources as defined in section 4928.75 of the Revised Code, that provide fuel diversity and environmental and other benefits.

(D) Encourage innovation and market access for cost-effective supply- and demand-side retail electric service including, but not limited to, demand-side management, time-differentiated pricing, waste energy recovery systems, smart grid programs, and implementation of advanced metering infrastructure;

(E) Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service and the development of perfcrmance standards and targets for service quality for all consumers, including annual achievement reports written in plain language;

(F) Ensure that an electric utility's transmission and distribution systems are available to a customer-generator or owner of distributed generation, so that the customer-generator or owner can market and deliver the electricity it produces;

(G) Recognize the continuing emergence of competitive electricity markets through the development and implementation of flexible regulatory treatment, while simultaneously recognizing the need for nuclear energy resources, as defined in section 4928.75 of the Revised Code, and resources that provide fuel diversity and environmental and other benefits;

(H) Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates;

(I) Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power;

(J) Provide coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates;

(K) Encourage implementation of distributed generation across customer classes through regular review and updating of administrative rules governing critical issues such as, but not limited to, interconnection standards, standby charges, and net metering;

(L) Protect at-risk populations, including, but not

limited to, when considering the implementation of any new advanced energy or renewable energy resource;

(M) Encourage the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs and alternative energy resources in their businesses;

(N) Facilitate the state's effectiveness in the global economy.

In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state.

Sec. 4928.75. As used in sections 4928.75 to 4928.7540 of the Revised Code:

(A) "Nuclear energy resource" means an electric generation unit fueled, in whole or in part, by nuclear power and licensed by the nuclear regulatory commission.

(B) "PJM" means the PJM Interconnection, L.L.C., or its successor.

(C) "Zero-emissions nuclear credit" means the attributes associated with one megawatt hour of electricity generated by a zero-emissions nuclear resource.

(D) "Zero-emissions nuclear resource" means a nuclear energy resource that meets the criteria of section 4928.754 of the Revised Code.

Sec. 4928.751. There is hereby created a zero-emissions nuclear resource program to enable the state to meet its policy goals and requirements under which zero-emissions nuclear

credits are purchased by electric distribution utilities to provide long-term energy security and environmental and other benefits to the region and to retail electric service customers in the state. An electric distribution utility in this state that has a zero-emissions nuclear resource located within its certified territory shall participate in the program. All electric distribution utilities in the same holding company system shall participate jointly and shall allocate costs across all classes of each participating utility's customers.

Sec. 4928.752. The zero-emissions nuclear resource program shall operate for successive two-year program periods beginning with the initial program period commencing on the effective date of this section and terminating on the last day of the eighth program period.

Sec. 4928.753. To provide zero-emissions nuclear credits under the zero-emissions nuclear program, an entity that owns or operates a nuclear energy resource shall file with the public utilities commission a written notice verifying that the resource meets the criteria under section 4928.754 of the Revised Code. The entity shall file the written notice not later than ninety days after the commencement of the initial program period.

Sec. 4928.754. A nuclear energy resource that satisfies all of the following criteria is a zero-emissions nuclear resource for purposes of zero-emissions nuclear credits:

(A) The resource is interconnected within the transmission system of PJM.

(B) PJM has determined the resource is transmission deliverable under the metrics by which PJM calculates

deliverability for purposes of capacity planning on a round-the-clock baseload basis into the transmission zone or zones of electric distribution utilities participating in the zero-emissions nuclear resource program under sections 4928.75 to 4928.7540 of the Revised Code.

(C)(1) For in-state nuclear energy resources:

(a) The resource has benefited the air quality profile of the state more than the predominant electric generation source with similar capacity and baseload characteristics as the resource as of the time the resource commenced operation.

(b) All of the following could occur if the resource ceased operation and its capacity were replaced at the same location by the then predominant electric generation source with similar capacity and baseload characteristics as the resource:

(i) The ability of the state, or region of the state, to maintain or decrease existing intensity of fine particulate matter or to comply with one or more state or federal air pollution control programs, standards, or goals is reduced.

(ii) The carbon dioxide emissions intensity of the state is negatively impacted.

(iii) The ability of the state to maintain or decrease existing intensity of carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen oxide, or sulfur dioxide is negatively impacted.

(2) For all other nuclear energy resources, each such resource is shown to provide no less than the same level of environmental benefits to the state as nuclear energy resources located within the state, pursuant to the requirements in division (C)(1) of this section.

(D) The resource, on or after January 1, 2017:

(1) Did not receive from another state tax exemptions, deferrals, exclusions, allowances, payments, credits, deductions, or reimbursements calculated in whole or in part using a metric that provides value for emissions not produced by the resource;

(2) Is not wholly owned by a municipal or cooperative corporation or a group, association, or consortium of those corporations; or

(3) Did not, during a program period described in section 4928.752 of the Revised Code, recover some or all of the capital or operating costs of the resource through rates regulated by a state.

Sec. 4928.755. With respect to a written notice filed under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, any interested person may file comments with the public utilities commission not later than twenty days after the written notice was filed.

Sec. 4928.756. An entity that owns or operates a nuclear energy resource may file with the public utilities commission a response to any comment made under section 4928.755 of the Revised Code, not later than ten days after the comment was filed.

Sec. 4928.757. Not later than fifty days after the filing of a written notice under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, the public utilities commission shall designate a resource that satisfies the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource and issue an order

consistent with that designation. If the commission does not issue an order in the time required by this section, the resource shall be deemed to be a zero-emissions nuclear resource.

Sec. 4928.7511. The public utilities commission, under a procedure it adopts, shall determine and issue the appropriate order regarding whether a nuclear energy resource described in division (C)(2) of section 4928.754 of the Revised Code satisfies the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource. The nuclear energy resource shall submit an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code. At minimum, the adopted procedure shall provide the opportunity for comment and response similar to the opportunities described under sections 4928.755 and 4928.756 of the Revised Code.

Sec. 4928.7513. A nuclear energy resource determined under section 4928.757 or 4928.7511 of the Revised Code to be a zero-emissions nuclear resource shall continue to be considered such a resource for all successive program periods as long as the resource continues to meet the criteria of divisions (A), (B), and (D) of section 4928.754 of the Revised Code. The provisions of sections 4928.75 to 4928.7540 of the Revised Code shall apply to any person to which zero-emissions nuclear resources are sold, assigned, transferred, or conveyed.

Sec. 4928.7514. Zero-emission nuclear resources shall provide zero-emissions nuclear credits for the zero-emissions nuclear resource program. Not later than thirty days before a program period commences, each zero-emissions nuclear resource shall confirm with the public utilities commission its intent to

continue to commit its credits under the program.

Sec. 4928.7515. All financial statements, financial data, and trade secrets submitted to or received by the public utilities commission for purposes of satisfying the criteria as a zero-emissions nuclear resource and any information taken for any purpose from the statements, data, or trade secrets are not public records under section 149.43 of the Revised Code.

Sec. 4928.7520. Not later than sixty days after the initial program period commences and not later than thirty days before a subsequent program period commences, the public utilities commission shall set the price for zero-emissions nuclear credits applicable for the period. For the initial program period the price shall be seventeen dollars per credit. For each subsequent program period, that price shall be adjusted for inflation using the gross domestic product implicit price deflator as published by the United States department of commerce, bureau of economic analysis, index numbers 2007=100.

Sec. 4928.7521. At the same time the public utilities commission sets the price for zero-emissions nuclear credits, the commission shall determine the maximum number of credits to be purchased by electric distribution utilities during the program period. The amount the commission sets shall equal one-third of the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report.

Sec. 4928.7522. Not later than seven days following the close of each quarter of a program period, each zero-emissions nuclear resource shall transfer all of its zero-emissions nuclear credits generated that quarter to the public utilities

commission, which shall hold the credits for the sole purpose of administering the program.

Sec. 4928.7523. Not later than seven days after the zero-emissions nuclear resource transfers its credits, the public utilities commission shall notify each participating electric distribution utility of the total amount of zero-emissions nuclear credits received from zero-emissions nuclear resources.

Sec. 4928.7524. (A) Except as provided in division (B) of this section, all participating electric distribution utilities shall purchase all zero-emissions nuclear credits transferred to the public utilities commission up to the maximum number of credits determined under section 4928.7521 of the Revised Code. The commission shall allocate the amounts to be purchased by each participating utility based on the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report. Each participating electric distribution utility shall pay the credit price for each credit purchased.

(B) If the owner, as of December 31, 2016, of a zero-emissions nuclear resource sells or transfers the zero-emissions nuclear resource, the commission shall reduce the number of zero-emissions nuclear credits to be purchased from that resource during the program period and, if necessary, successive program periods, to reflect an adjustment equal to one-half of the dollar amount of any net proceeds available after the payment or provision for the seller's known obligations, but in no instance shall this adjustment apply to a sale or transfer under the United States Bankruptcy Code, including, but not limited to, sections 363 and 1123, 11 U.S.C. sections 363 and

1123.

Sec. 4928.7525. The public utilities commission shall deposit all payments for credits into the zero-emissions nuclear resources fund created under section 4928.7532 of the Revised Code.

Sec. 4928.7526. Not later than seven days after receipt of utility payment, the public utilities commission shall pay to each zero-emissions nuclear resource the amount paid for each of the resource's zero-emissions nuclear credits purchased from the zero-emissions nuclear resources fund.

Sec. 4928.7527. Credits purchased by participating electric distribution utilities may not be transferred, sold, or assigned to any other entity.

Sec. 4928.7530. Each participating electric distribution utility shall recover any and all direct and indirect costs for the purchase of zero-emissions nuclear credits through a nonbypassable rider charged to all of its retail electric service customers, which rider shall be established not later than sixty days after the effective date of this section. The nonbypassable charge shall be designed such that no retail electric service customer shall have an increase resulting from the nonbypassable rider in the customer's total retail electric service bill of more than five per cent as compared to June 2015. The participating electric distribution utility shall defer as a regulatory asset an amount equal to the revenue reduction resulting from the five per cent limit on customer bill increases and recover the deferral plus carrying charges through a nonbypassable charge assessed over a twelve-month period.

Sec. 4928.7532. There is hereby created the zero-emissions nuclear resources fund that shall be in the custody of the treasurer of state but shall not be part of the state treasury. The fund shall consist of all money collected by the public utilities commission from purchases of zero-emissions nuclear credits. The amounts deposited into the fund shall be used to pay the credit purchase price to the resources that generated the credits. All investment earnings from the fund shall be transferred by the treasurer to the general revenue fund in the state treasury.

Sec. 4928.7533. During each program period in which a zero-emissions nuclear resource receives payment for credits under section 4928.7526 of the Revised Code, an entity that owns or operates that zero-emissions nuclear resource and that has its corporate headquarters located in this state shall continue to maintain its corporate headquarters in this state.

Sec. 4928.7534. During the sixth and eleventh years of the zero-emissions nuclear resource program, the public utilities commission shall evaluate the zero-emissions nuclear credit price established under section 4928.7520 of the Revised Code for the purpose of discerning whether the program is achieving the policy goals in section 4928.751 of the Revised Code and whether those policy goals are being met through other federal environmental laws, programs, rules or regulations, or through amendments to the federal tax code. Upon the conclusion of its evaluation, the commission shall report the results of its evaluation to the standing committees of both houses of the general assembly that have primary jurisdiction regarding public utility legislation. In no case shall the zero-emissions nuclear resource program terminate earlier than the last day of the second program period.

Sec. 4928.7540. (A) For purposes of this section:

(1) "Employment levels" means the number of full-time employees regularly providing services at the location of a zero-emissions nuclear resource.

(2) "Full-time employee" means an individual who is employed for consideration for at least thirty-five hours per week, or who renders any other standard of service generally accepted by custom or specified by contract as full-time employment.

(B) During each program period in which a zero-emissions nuclear resource receives payment for zero-emissions nuclear credits under section 4928.7526 of the Revised Code, the employment levels at that zero-emissions nuclear resource shall continue to be similar to that of nuclear energy resources constructed prior to 1990 in the United States with the same reactor type, similar nameplate capacity, and single-unit location.

Section 2. That existing section 4928.02 of the Revised Code is hereby repealed.

Rep30

From: Rep30
Sent: Wednesday, July 05, 2017 10:37 AM
To: 'louterhar@gmail.com'; DeVitis, Anthony; jeklund@calfee.com; Lehman, Ryan; Bill.Beagle@ohiosenate.gov; Troy.Balderson@ohiosenate.gov
Subject: Food for Thought
Attachments: 20170623-5008(32229293).pdf

Please see enclosed

UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

State Policies and Wholesale Markets Operated by ISO New England Inc., New York Independent System Operator, Inc., and PJM Interconnection, L.L.C.	)	Docket No. AD17-11-000

COMMENTS OF THE INDEPENDENT MARKET MONITOR FOR PJM

Pursuant to the notice issued in this proceeding May 23, 2017, inviting post-technical conference comments, Monitoring Analytics, LLC, acting in its capacity as the Independent Market Monitor ("Market Monitor") for PJM Interconnection, L.L.C. ("PJM"), submits these comments.

I. INTRODUCTION

The Market Monitor believes that there is a constructive way forward to recognize and accommodate state public policy issues in competitive wholesale power markets. But rather than directly accommodate specific approaches that attempt to reverse market outcomes and undercut markets, it would be more productive to take a forward looking collaborative approach to systematically and consistently address, using market principles, the concerns of state and federal regulators, ISO/RTOs and market participants. The combined wisdom and abilities of all these stakeholders can address these concerns in a forward looking way that recognizes the benefits of markets for all market participants. It is urgent that the identified issues be addressed. But it is not so urgent as to prevent a rational, forward looking and collaborative approach to addressing the issues that are faced by all.

II. COMMENTS

PJM markets are working. The price of energy in 2016 was the lowest since the beginning of PJM competitive markets on April 1, 1999.[1] Fuel diversity has increased.[2] Gas is very cheap and energy from highly efficient gas-fired combined cycle generating plants is correspondingly cheap and generally less expensive than energy from coal-fired plants.[3]

Wholesale power markets are successful and sustainable when the revenues from the combination of markets provide the incentives necessary for entry and exit consistent with ongoing reliability. PJM markets meet this test.

The PJM design relies on a combination of energy and capacity markets that has worked well to provide incentives to provide energy and capacity at the lowest possible cost. There is no reason to change the fundamental PJM market design. Suggestions that a bilateral substitute for the PJM Capacity Market would provide more choices for customers and be more effective at ensuring reliability are misguided. The PJM capacity market is a must buy and must sell construct by design. If load did not have to purchase capacity and generators did not have to sell capacity, the market could not function to ensure a market price signal for the defined level of reliability. Bilateral markets expose all participants to market power exercised by those with superior market information. Competitive markets are transparent while bilateral markets are opaque. Load is especially exposed to the exercise of market power by generators, especially given that market power is endemic in the PJM Capacity Market given the ownership structure. But sophisticated loads could also exercise market power against generators. The PJM Capacity Market provides competitive,

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1 See the *2016 State of the Market Report for PJM*, Vol. 2, Section 3: Energy Market

2 *Id.* at Section 3: Energy Market pp 106 – 107 and Section 5: Capacity pp 223 – 224.

3 *Id.* at Section 7: Net Revenue, Figure 7-5.

transparent outcomes that benefit both generation and load and are demonstrably superior to a bilateral approach.

One of the factual questions underlying the subsidies discussion is whether some units are uneconomic. If a plant does not cover its going forward costs and expects to continue to not cover its going forward costs, the market is sending a retirement signal; the owner of the plant is better off if the unit retires than if it remains in service. Gas-fired combined cycle plants have covered going forward costs in PJM markets. Most nuclear plants also cover going forward costs in PJM markets. In 2016, approximately three quarters of nuclear plants covered 100 percent or more of going forward costs. The net revenues of nuclear plants are very sensitive to energy prices. If energy prices in all of 2016 had been equal to energy prices in the first quarter of 2017, all but one nuclear plant would have covered its going forward costs. In 2016, less than half of all coal plants covered more than 90 percent of going forward costs.[4]

Some owners of nuclear power plants define economic as achieving a target rate of return on assets. These owners confuse markets with cost of service ratemaking. There are no guaranteed rates of return in markets. Even if the goal were to subsidize plants to ensure they remained in service, the effective subsidy level would cover going forward costs and no more. It is not clear how the level of proposed subsidies for specific plants in PJM was reached.

It continues to be profitable to invest in new combined cycle plants in PJM, especially in the eastern zones. A new combined cycle unit in the eastern zones of PJM would have covered 100 percent of its levelized annual cost in 2016, including a return on and of capital.[5] A new combined cycle that entered the PJM market in 2012 in an eastern

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4 See the *2017 Quarterly State of the Market Report for PJM: January through March*, Section 7: Net Revenue

5 See the *2016 State of the Market Report for PJM*, Vol. 2, Section 7: Net Revenue, Figure 7-7.

zone would have covered more than 100 percent of its levelized annual cost through 2016.[6] It is not profitable and has not been profitable to invest in either new coal or nuclear power plants in PJM, and it is not likely to become profitable.[7] More than 20,000 MW of uneconomic coal-fired generation has retired and been replaced by a combination of gas-fired units, renewable resources and demand side resources. PJM has retained a robust reserve margin based on market signals.

What is the problem that subsidies are intended to solve? The problem appears to be that competitive markets are working as intended. Low gas prices result in low power prices which result in low net revenues for coal and nuclear power plants. The result is that the profits of some units are lower as a result of these competitive pressures. The impact of competition on coal units has been much greater than the impact of competition on nuclear units. Nuclear units have not been made generally uneconomic as a result of competition.

The owners of units under competitive pressure propose a short term solution for their issues. The owners of nuclear plants have attempted to make a more general case for subsidies than the owners of coal plants.

The owners of some nuclear and coal units have proposed to require customers to subsidize these units. The owners of these units have, in some cases, sought to require customers to pay subsidies to offset the impact of competition on specific units. The owners of some coal plants demonstrated that the units were uneconomic in litigated cases. The owners of nuclear plants requesting subsidies have not convincingly demonstrated that they are uneconomic. The subsidies solution appears to be gaining ground among some owners of units in PJM and elsewhere. Subsidies for nuclear plants seem to have more traction than subsidies for coal plants.

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6 *Id.* p. 295.

7 *Id.* at Figure 7-8 and Figure 7-9.

The longer term solution, consistent with and a logical extension of the short term subsidies solution, is to reregulate power generation. That is the logical outcome if the starting place is the assertion that market outcomes are not acceptable, that unit owners and state regulators know the right mix of generation and that unit owners and state regulators are prepared to override market outcomes to implement their approach. Once these steps are taken, it is difficult to argue that it is reasonable to have subsidies for only one technology and in only one state. The logic of subsidies leads to subsidies for all units and ultimately to reregulation. This is not hyperbole. It is a foreseeable outcome of the subsidies solution.

Competition in wholesale power markets, initially in the limited form of PURPA in 1978, was a response to cost overruns at nuclear power plants which were a preferred technology of utility managements and state regulators at the time. The irony would be to end competition in wholesale power markets because the same nuclear power plants are not cost effective in competitive markets and because the owners of those plants successfully seek subsidies to override market outcomes.

There is another option, both short term and longer term. The alternative to subsidies and reregulation is to let markets work. There is no defined market design problem that requires subsidies.

Most nuclear plants did not receive a retirement signal from PJM markets in 2016, even with the lowest energy prices in the history of PJM. Some units were uneconomic in 2016, for example, as a result of their location on the system but that outcome was a result of uniquely low 2016 energy prices. If uneconomic units continue to produce low cost energy as a result of subsidies, that will reduce energy prices and therefore make other units less profitable and more likely to be uneconomic in the future. The result is that if uneconomic units are subsidized that will lead to additional requests for subsidies.

The arguments for subsidies include the assertion that nuclear power plants are a cost effective way to reduce carbon output. If society agrees that carbon is a pollutant, it has not been demonstrated that subsidizing nuclear power plants is the most cost effective way

to reduce carbon emissions; that conclusion is highly unlikely to be correct. It is widely agreed by economists that a carbon price would be a preferable, market-based solution that provides incentives to the most cost effective approaches to carbon reduction. It is not clear why the market-based solution of a carbon price is rejected as impractical while subsidies that undermine markets are deemed a practical solution.

Even in the absence of a carbon price, an auction for the most cost effective sources of carbon reduction would be preferable to the unexamined assumption that subsidies are a cost effective way to reduce carbon.

The arguments for subsidies include the assertion that coal and nuclear power plants are needed for fuel diversity. If the underlying fuel diversity issue is actually the reliability of supply rather than simply having multiple fuels, it is rational to take steps to ensure that the power supply is reliable. It has not been demonstrated, or even explicitly asserted, that subsidies to uneconomic units are a cost effective way to ensure reliability through fuel diversity.

It should go without saying that, in a competitive market, subsidies to economic units are inappropriate for any reason, carbon related, diversity related or any other reason.

If the grid were built from scratch today, the generation mix would likely consist of gas fired combined cycle units with oil or other backup, gas fired combustion turbine units with oil or other back up, wind units, solar units and hydro units. The risks of reliance on gas need to be addressed directly and systematically using many of the same techniques used by electric transmission planners.[8] The incentives of gas pipelines and merchant power generators need to be examined carefully and harmonized to help ensure that merchant power plants can purchase firm no notice gas service. The planning process for gas pipeline construction and operation should recognize the efficiencies that have resulted

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[8] PJM Interconnection, L.L.C., "PJM's Evolving Resource Mix and System Reliability," Grid 20/20, Philadelphia, PA (March 30, 2017).

from ISO/RTOs in power markets. These steps would be a sensible strategy even without increased reliance on gas-fired generation. The incremental costs are likely to be low.

It would make sense, as a matter of policy, to recognize that the markets are forward looking and that it is shortsighted to attempt to retain uneconomic resources that were built more than 30 years ago simply because the transition to the future is difficult and, for some resources, wrenching. As tempting as it may be, it would not make sense to subsidize old, uneconomic resources rather than to plan for the future in which the generation mix will look very different. Each decision has consequences for the future path of market development. Every subsidy has an opportunity cost; the opportunity cost is the foregone alternate path to reliable supply. The optimal transmission grid will look very different under a future with gas and renewables. Investment in a transmission grid linked to uneconomic resources has an opportunity cost; the opportunity cost is the foregone transmission investments required to serve load under the generation resources of the future.

The concept of baseload resources is backward rather than forward looking. Baseload units are units that run for most hours of the year. But the term baseload is now frequently used to mean units that used to run a lot of hours based on old economics, that no longer run a lot of hours based on current economics, and that are seeking subsidies to make up the difference in revenues. Coal units are now frequently more expensive to run than gas units on the basis of economic dispatch, operate fewer hours than in prior years and earn lower net revenues as a result. Nuclear units are inflexible, run all hours of the year, have dispatch costs near zero but cannot cover going forward costs based on the net revenues from market prices that are low as a result of low gas prices.

It would be a mistake for ISO/RTOs to have a limited MOPR of the type defined in the Commission's Path 1 or to continue with the status quo as defined in the Commission's Path 3. Both paths would permit state subsidies to have a substantial impact on markets and Path 3 would rely on litigation rather than rational market design decisions to define the appropriate scope of any MOPR approach.

It would be a mistake for ISO/RTOs to explicitly accommodate state level subsidies in the market design and specifically in the capacity market design. (Commission Path 2.) Despite the fact that some very complex and creative approaches (e.g. ISONE) have been developed to accommodate subsidized units in capacity markets, these approaches all share the attribute that they facilitate the forcing out of nonsubsidized economic units by subsidized uneconomic units. That outcome is inconsistent with a market outcome and will either be ineffective in accommodating all subsidized units or will lead to reregulation.

The accommodate approach accepts the assertion that states can take back authority over generation on a selective basis. But that is not logically possible. The state regulation approach is fundamentally inconsistent with the Commission's market-based approach. State regulation in the form of specific subsidies will suppress capacity prices and undermine the incentive to invest of private investors and lead ultimately to reregulation.

States are at a disadvantage in negotiating with unit owners who demand subsidies because the public utility commissions are not currently responsible for the regulation of generation and do not have current information on actual costs and revenues. This asymmetric bargaining power has resulted in the overstatement of economic difficulties at specific units and a corresponding overstatement of required subsidies.

The premise appears to be that, although individual states have ceded authority over decisions related to generation to the Commission regulated markets, individual states can take back that authority on a piecemeal basis. It appears to be clear that states can take back authority over generation and reimpose state cost of service regulation on generation. But absent that decision, the status quo is continued reliance on markets and on Commission approved market designs that use competition in place of cost of service regulation to ensure that customers receive wholesale power at the lowest possible cost.

The current debates are in part a reflection of the absence of a single voice on markets and how to address fundamental market design issues in the Commission regulated markets. That voice should be the Commission. The solution is not to accommodate the confusion associated with multiple potential decision makers but to

attempt to resolve the confusion. The Commission is uniquely equipped and has the unique authority to make the final call on market design decisions, including those about internalizing the costs of environmental issues.

If the real interest is in environmental impacts, it is clear that markets can accommodate the environmental impacts of power generation. But power markets can accommodate environmental impacts only if they are designed consistent with market principles. Markets can accommodate a carbon price whether it is defined as a tax, a price or based on cap and trade. Markets cannot accommodate approaches that ignore and are inconsistent with market principles. Markets cannot accommodate unit specific subsidies designed to reverse the results of competitive markets. Markets cannot accommodate nonsynchronized approaches by multiple states to renewable power sources that provide conflicting signals and incomplete and inefficient market outcomes. For example, it does not make sense to have an implied price of carbon in one state of $200 per tonne and an implied price of carbon of $50 per tonne in another state and inconsistent rules for trading between states, despite the fact that all participants belong to the same wholesale power market.

But there is a way to recognize and accommodate state public policy issues in competitive wholesale power markets. Rather than directly accommodate approaches that attempt to reverse market outcomes and undercut markets, it would be more productive to take a forward looking collaborative approach to systematically and consistently address, using market principles, the concerns of state and federal regulators, ISO/RTOs and market participants. If carbon is a core issue, PJM could model a carbon price regime and estimate the impacts on the dispatch of individual units, estimate the impact on carbon output, and estimate the financial impacts on customers in individual states and provide other information relevant to state decision makers. PJM could convene stakeholders who could arrive at a consensus on an efficient and least cost approach to carbon pricing based on the information about impacts, including an explicit agreement about the assignment of funds to states, and the Commission could make a decision. The Commission could revisit its

decision about jurisdiction over renewable power standards and convene a discussion with the states, the ISO/RTOs and market participants to develop an efficient market wide approach to meet specific renewable energy goals at least cost and to calculate the impacts on customers. That solution should be fully coordinated and consistent with the approach to carbon and could also rely on a carbon price. If fuel reliability is a core issue, approaches to ensuring fuel reliability could be reviewed, costs and benefits of implementation could be reviewed and a least cost, market-based approach to reliability could be agreed upon in a stakeholder process organized by PJM.

The fundamental issue is not about the definition of specific problems like carbon emissions or fuel diversity. The fundamental issue is about whether all stakeholders, collectively, choose to continue with the development of market solutions for wholesale power to address current and future challenges or choose to return to a more directly regulated approach to wholesale power. The evidence points strongly to the benefits of markets. The Commission has the authority to ensure that markets remain competitive and effective. But the states have the authority to decide whether to withdraw from markets.

From the five potential paths forward, a combination of Path 4 and Path 5 are consistent with continued reliance on market solutions. Path 4 would permit state policies to be "readily integrated into the wholesale markets in a resource-neutral way." When that is not possible, Path 5 would be consistent with continue reliance on markets. Path 4 and Path 5 could be designed and implemented based on the described collaborative approach. The goal would not be to accept any and all state policy initiatives nor would it be to reject most or all state policy initiatives. The collaborative approach would ultimately be subject to Commission decisions.

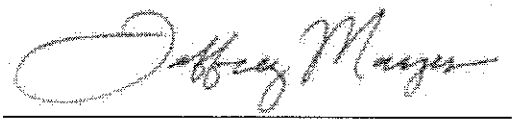
If state policies, like unit specific subsidies for uneconomic units, cannot be readily integrated into the wholesale markets in a resource neutral way, an expanded MOPR is required. An expanded MOPR "would minimize the impact of state-supported resources on wholesale market prices by expanding the existing scope of the minimum offer price rule to apply to both new and existing capacity resources that participate in the capacity

market and receive state support." But the goal would be that the expanded MOPR would be a preventative measure that served as a disincentive to engage in actions not consistent with Path 4. If a collaborative approach based on Commission authority over wholesale power markets can be implemented, Path 5 would be implemented only an exceptional basis.

III. CONCLUSION

The Market Monitor respectfully requests that the Commission afford due consideration to these comments as it resolves the issues raised in this proceeding.

Respectfully submitted,



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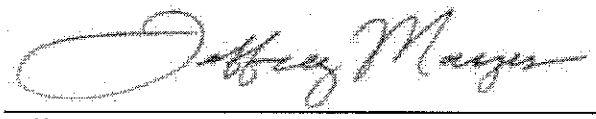
jeffrey.mayes@monitoringanalytics.com

Dated: June 22, 2017

CERTIFICATE OF SERVICE

I hereby certify that I have this day served the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Eagleville, Pennsylvania,
this 22nd day of June, 2017.



Jeffrey W. Mayes
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Eagleville, Pennsylvania 19403
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jeffrey.mayes@monitoringanalytics.com

Rep30

From: Seitz, William <william.seitz@dinsmore.com>
Sent: Tuesday, February 07, 2017 10:35 AM
To: Wolf, Jimmy
Subject: FW: ZEN Pdf
Attachments: ZEN Final 01302017.pdf; ATT00001.htm

Send this to Kasych/Lehman with note, here is what FE sent me last Monday on their nuclear plant issues.

From: Pine, Ty [mailto:tpine@firstenergycorp.com]
Sent: Monday, January 30, 2017 12:14 PM
To: Seitz, William
Subject: Fwd: ZEN Pdf

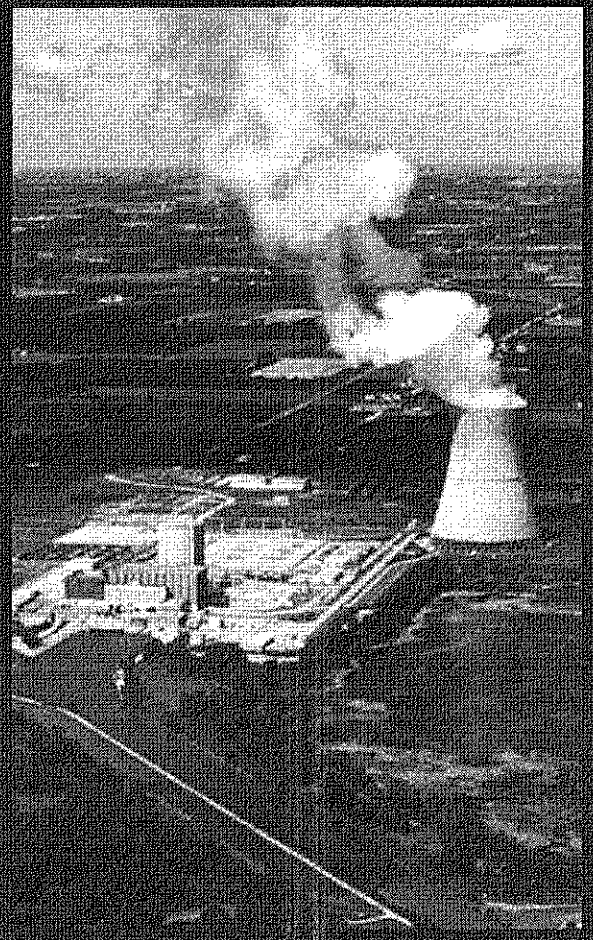
Sent from my iPad

Begin forwarded message:

> **From:** "Noewer, Sharon L." <slnoewer@firstenergycorp.com>
> **To:** "Pine, Ty" <tpine@firstenergycorp.com>
> **Cc:** "Henry, Michelle R." <mrhenry@firstenergycorp.com>, "Grealy, Anne M" <agrealy@firstenergycorp.com>, "D'Alessandris, Louis M" <ldalessandris@firstenergycorp.com>
> **Subject: ZEN Pdf**
>
> Ty,
> As requested, attached is a pdf version of the final ZEN presentation.
> Sharon
>
> Sharon L. Noewer
> Director, Market Policy Planning & Analytics
> Akron, Ohio 44308
> 330.384.5432 (office)
> slnoewer@firstenergycorp.com

FirstEnergy

Benefits of Ohio's Nuclear Assets



January 2017

National Benefits of Nuclear

Economic Benefits

- Provides 24/7 electric supply, long-term price stability, clean air benefits and job creation
- Adds $60 billion annually to the GDP
- Supports more than 475,000 full time jobs
- Contributes nearly $10 billion annually in federal tax revenues and $2.2 billion in additional state revenues

Environmental Benefits

- Largest source of electricity that does not emit greenhouse gases and other air pollutants
- Prevents 573 million tons of carbon dioxide emissions
- Carbon emissions would be 23% higher without nuclear

Fuel Diversity

- A diverse generating portfolio supports affordability and reliability
- Ensures secure fuel inventory; plants can operate up to 18-24 months without refueling
- IHS estimates $93 billion in annual savings when compared to a less diverse mix

Nuclear power provides critical system reliability and environmental benefits

Nuclear Plants Are Closing Prematurely

Plant	Location	MW	Operating License Expiration	Premature Closing Date	Reason for Closure
Kewaunee	Wisconsin (MISO)	556	2033	2013	PPA ended, low energy and capacity prices
Vermont Yankee	Vermont (ISO-NE)	620	2032	2014	Low energy and capacity prices
Fort Calhoun	Nebraska	478	2033	December 2016	Cheaper to purchase elsewhere
FitzPatrick	New York (NYISO)	838	2034	January 2017*	Low energy and capacity prices
Ginna	New York (NYISO)	610	2029	March 2017 *	Low energy and capacity prices
Clinton	Illinois (MISO)	1,098	2026	May 2017**	Low energy and capacity prices
Quad Cities	Illinois (PJM)	1,880	2032	May 2018**	Low energy and capacity prices
Palisades	Michigan (MISO)	800	2031	October 2018	PPA terminated early; cheaper to purchase elsewhere
Pilgrim	Massachusetts (ISO-NE)	690	2032	May 2019	Low energy and capacity prices
Oyster Creek	New Jersey (PJM)	636	2029	May 2019	Settlement to close early in return for no cooling tower install
Indian Point	New York (NYISO)	2,080	2035 (renewal pending)	April 2021	Low energy prices, public opposition
Perry	Ohio (PJM)	1,260	2026 (eligible for license renewal)	TBD	FirstEnergy has publicly stated its intention to be a fully regulated company; nuclear plants will either be placed in a regulated-like construct, sold or closed
Davis-Besse	Ohio (PJM)	900	2037	TBD	
Beaver Valley	Pennsylvania (PJM)	1,800	2036 / 2047	TBD	

Nuclear plants are closing prematurely, primarily due to a lack of adequate energy and capacity compensation

* FitzPatrick and Ginna closures were announced, however recent actions by the New York State Public Service Commission will provide additional compensation to the plants allowing for their continued operation

** Clinton and Quad Cities closures were announced, however the Illinois legislature passed SB 2814, providing additional compensation and allowing for their continued operation

State and RTO/ISO Nuclear Initiatives

Illinois

- Legislation passed that creates Zero Emission Credits (ZECs) to provide additional revenue to qualifying nuclear plants to avoid their premature retirements.

New York

- PSC approved the creation of ZECs to provide additional revenue stream to at-risk nuclear plants to ensure continued operation.

Connecticut

- Senate Bill 106 introduced on January 13, 2017 to address nuclear PPAs; Similar 2016 legislation passed the Senate but failed to pass the House prior to the end of session.

ISO – New England

- NEPOOL stakeholder group investigating ways to integrate public policy into market construct, including a carbon adder, two-tier capacity market and forward clean energy market. Recommendation expected in 2017.
- Future direction to be discussed in February.

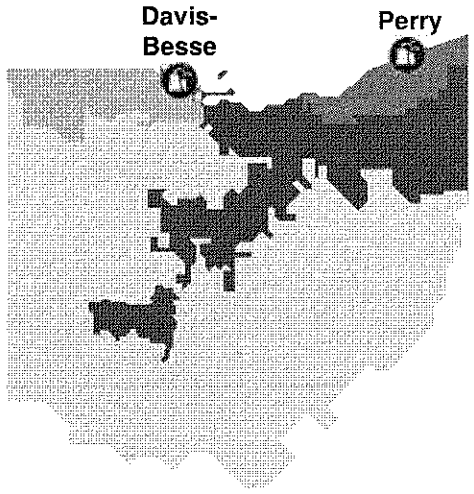
PJM

- PJM released a white paper on alternative approach to capacity market design to account for state policy goals.
- PJM will release a fuel diversity study in the first quarter of 2017.

Nuclear Power is Important to Ohio

Plant	MW	Jobs	License
Davis-Besse	900	700	2037
Perry	1260	720	2026*

* Eligible for license renewal



ECONOMIC BENEFITS

CONTRIBUTES **$521 MILLION** TO STATE GDP

ACCOUNTS FOR CLOSE TO **3,600 IN-STATE** FULL TIME JOBS

SAVES CONSUMERS AN AVERAGE OF **1.4 PERCENT** ON ELECTRICITY BILLS

CONTRIBUTES **$112 MILLION in FEDERAL** & **$17 MILLION in STATE TAXES** EACH YEAR

CLEAN ENERGY BENEFITS

AVOIDS **11+ MILLION** TONS OF CARBON EMISSIONS EACH YEAR

+

PREVENTS **12,000 TONS OF NO_x** AND **18,000 TONS OF SO_2** EMISSIONS

Ohio's two nuclear plants produce over 17 million MWh annually, equivalent to 11% of the state's consumption and provide critical benefits for OH of more than $1.1 billion

Source: Brattle report "Ohio Nuclear Power Plants' Contribution to the State Economy", July 7, 2015

Nuclear Plant Closures Harm Ohioans

- **If Davis-Besse and Perry closed, the power they generate would be replaced in one of three ways**
  1. **Replaced with emitting resources**
     - Nuclear prevents 12,000 tons of NOx and 18,000 tons of SOx emissions
     - Nuclear produces 0 lbs. of CO2 per MWh, compared with 1,220 lbs./MWh for gas and 2,070 lbs./MWh for coal*; equivalent to adding 2.0-3.4 million cars on the road**
     - Additional Ohio counties could become EPA non-attainment areas; limiting future economic development
  2. **Replaced with imports**
     - In 2015, Ohio imported over 27 million MWh from surrounding states***
     - Removing Davis-Besse and Perry would require Ohio to import over 17 million additional MWh, increasing reliance on out-of-state power from 18% to 30%
       - Only California would import more power than Ohio
  3. **Replaced with in-state renewables**
     - To replace Davis-Besse and Perry with wind, Ohio would require 520 to 720 square miles of land for wind turbines, an area larger than Franklin County****
     - Would cost between $6.4 billion and $9.4 billion*****

Without Davis-Besse and Perry, Ohio would either increase emissions, import more power or consume large areas of land with renewable technologies

* Source: EIA FAQ "How much carbon dioxide is produced per kilowatt hour when generating electricity with fossil fuels"
** Source: EPA Greenhouse Gas Equivalencies Calculator
*** Source: EIA-861, EIA-906, EIA-920, EIA-923
**** Source: NEI "Land Requirements for Carbon-Free Technologies"
***** Source: NEI "Land Requirements for Carbon-Free Technologies" and AWEA cost data

Proposed Legislation

Overview of Zero-Emissions Nuclear Resource (ZEN) Program

- **ZEN Program starts in 2017 and has no sunset date**
- **Qualifications**
  - Nuclear energy resource interconnected with PJM and has been determined to be deliverable on a baseload basis
  - Has improved Ohio's air quality profile compared to the predominant resource at the time it was built
  - If it were replaced by today's predominant resource, could
    - Reduce the ability of the state to comply with state or federal air pollution control programs;
    - Negatively impact the state's carbon dioxide emissions intensity; and
    - Negatively impact the state's ability to comply with any then-existing national ambient air quality standard
  - For resources out of the state, must produce no less than the same level of environmental benefits to the state as resources in Ohio
  - Excludes resources receiving revenues for lowering emissions, munis/coops, and resources recovering costs through state-regulated rates
- **Target price is $17/MWh for the first two-year reporting period and adjusted for inflation thereafter**
  - Average residential customer impact expected to be less than 5% for FirstEnergy Ohio utility customers

Proposed Legislation

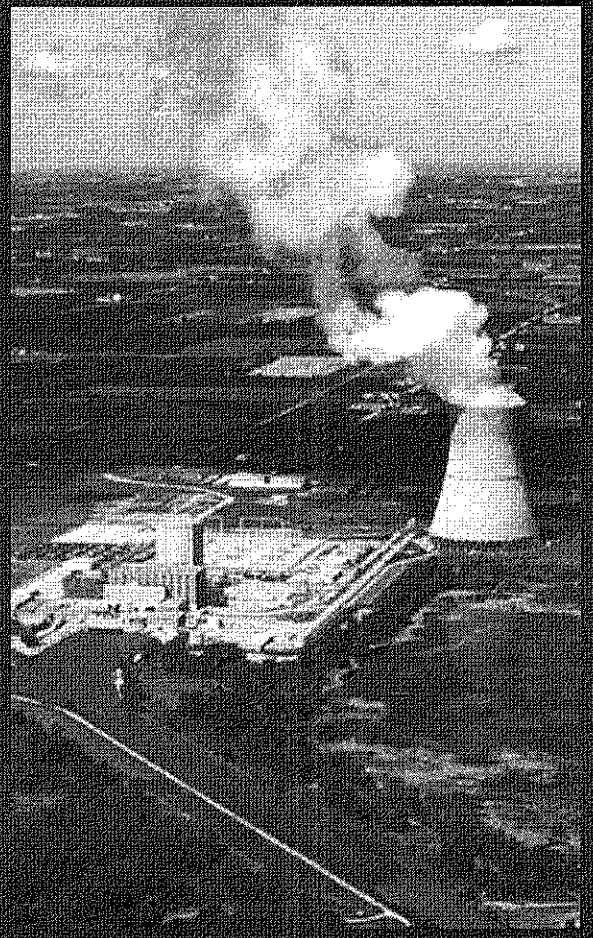
Qualification and payment process

- **Utility with nuclear resources in its territory shall administer the program and allocate costs among the affiliated utility customers**
- **Process**
  - In-state resources
    - Nuclear resource must file notice of intent to participate 90 days in advance
    - Parties can file comments within 20 days
    - Reply comments filed 10 days thereafter
    - PUCO determination within 50 days after docketing of the notice; automatic if PUCO fails to act
  - Out-of-state resource process to be determined by PUCO
  - If approved, do not have to repeat process for future reporting periods; must file notice of intent to participate 30 days in advance
- **Credits are capped at 1/3 of retail sales in MWh in previous 2 calendar years**
- **Payment and cost recovery**
  - PUCO determines maximum number of credits for each utility to purchase; payments deposited into a zero-emissions nuclear resources fund
  - Within 7 days of quarter close, resource transfers all credits generated that quarter to the PUCO
  - Resources paid on a quarterly basis
  - Costs recovered through a reconcilable non-bypassable rider

Experts Thoughts on Importance of Nuclear

- **"But overall I'm very supportive of nuclear. I think it's a travesty that these nuclear units are getting retired. And if there is any kind of state support that can be given to support these nuclear units, that's a good thing because this competitive market – we call it a market and PJM is not working for long-term base load capacity."**
  - Nick Akins, AEP CEO, January 26, 2017
- **"Although there has been attention focused on the loss of coal-fired generation, nuclear plants are under increasing economic pressure to close as a result of record low capacity prices. In addition to several announced nuclear plant closures, some utilities have predicted additional retirements if specific units are unable to operate profitably. Losing these plants has long-term implications both to the reliability of the system and on the nation's emission profile."**
  - FERC Commissioner Phillip Moeller, April 10, 2014
- **"We need to maintain our nuclear fleet, as it is a valuable base load and carbon free resource."**
  - FERC Commissioner John Norris, May 15, 2014
- **"I think the challenge is very clear, with the economic challenges facing certainly some of our nuclear plants. We're seeing, as you well know, some closures before license expirations. We're seeing the prospect of even more. The importance of incentivizing continued operation I think is very clear, but the solutions are less clear."**
  - Dr. Ernest Moniz, Secretary of Energy, May 19, 2016

FirstEnergy



Appendix

January 2017

Illinois SB 2814

Overview of ZEC Program Portion of IL Jobs Bill

- **ZEC Program starts June 1, 2017**
- **Illinois Power Agency (IPA) will procure ZECs equal to 16% of total MWh of electricity delivered by IL utilities in 2014 (excludes munis/coops)**
  - ~20.4 Million MWh
  - 10 year contract duration
- **Open to any nuclear unit interconnected with PJM or MISO**
- **IPA will select winning bids based on public interest criteria including:**
  - Minimizing carbon dioxide emissions
  - Minimizing sulfur dioxide, nitrogen oxide and particulate matter emissions
  - Incremental environmental benefits, such as existing environmental benefits that are preserved and would cease to exist if procurements were not held, including the preservation of zero emission facilities
- **ZECs, RECs and Carbon Emission Credits can only be used once to comply with a single portfolio**
- **Price is equal to the Social Cost of Carbon offset by market index ($16.50/MWh)***
- **ZEC Price is reduced to ensure affordable to customers ($235 million cap; ~$11.50/MWh)***
  - Further reduced if the market price exceeds the baseline market price index
  - Adjusted for inflation each year of the program
  - Beginning with the 2023/2024 delivery year, the price per MWh will also increase by $1 per MWh annually

* Proposed Ohio solution uses different pricing methodology

New York Clean Energy Standard

Overview of ZEC Program Portion of NY CES Order

- **ZEC Program starts April 1, 2017**
- **New York State Energy Research & Development (NYSERDA) will procure ZECs and sell (at cost plus an adder) to Load Serving Entities (LSEs)**
  - Program is capped at 27.6 million MWHs
  - 12 year contract duration, with prices reset every two years
- **New York shall provide a subsidy for zero-emission attributes to nuclear plants if there is a public necessity to preserve them**
  - Only the three update nuclear plants initially meet the standard
  - Indian Point may seek inclusion in the future
- **Initial price is $17.48***
  - Based on the Social Cost of Carbon, with offsets for forecasted energy and capacity revenues above $39/MWh
  - Pre-offset cost increases to $19.59 starting April 1, 2019; $21.38 starting April 1, 2021
- **Performance standard requires a minimum 85% performance vs. cap**
- **A coalition of energy companies filed a complaint against the NYPSC for infringing on the FERC's jurisdiction over federally regulated wholesale energy markets**
  - Parties have a status conference with the judge on December 16

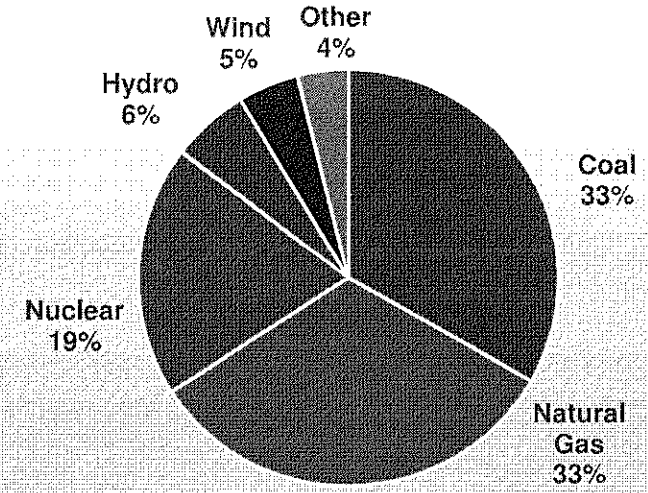
* Proposed Ohio solution uses different pricing methodology

Nuclear is the Largest Source of Low-Emission Electricity

All Sources of Electricity

- **Nuclear power generates nearly 1/5 of the electricity in the United States**
  - More than hydro, wind, solar and geothermal combined

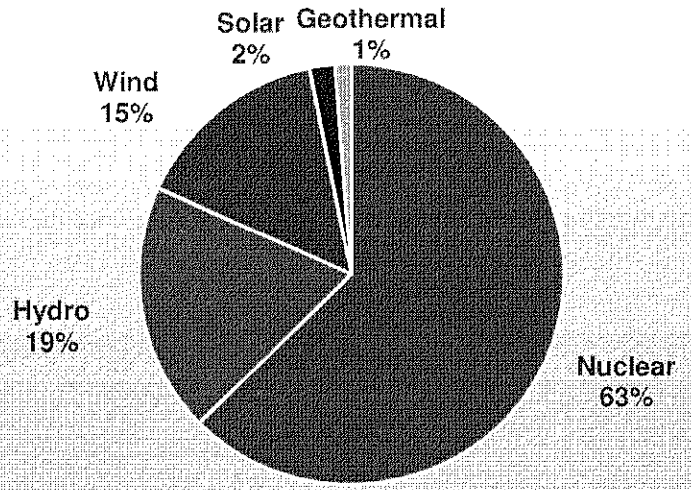
U.S. Sources of Electricity, 2015



Low-Carbon Electricity

- **Nuclear power provides 63% of the nation's carbon-free electricity**
  - 32 times as much as solar
  - 4 times as much as wind
  - 3 times as much as hydro

U.S. Low-Carbon Electricity, 2015



Source: EIA data

Rep30

From: Rep30
Sent: Monday, February 13, 2017 10:21 AM
To: 'Ty Pine (tpine@firstenergycorp.com)'
Subject: ZEN

My notes of our discussion two weeks ago show that you said gas currently has a $14-19/mwH fuel cost and $1-2/mwH operating cost, while nuclear currently has $7/mwH fuel cost and a $21/mwH operating cost. By my math, the lowest current gas cost is then $15/mwH as against nuclear's $28/mwH, though it could be $21/mwH gas as against $28/mwH nuclear. Either way, the difference of $7-13/mwH is appreciably less than the $17/mwh in your proposal.

Of course I recognize that the $17/mwH has nothing to do with such comparisons, but rather is based on your interpolation of the environmental benefits of zero carbon emissions. That, however, is not exact science, and it seems to me that we are entitled to evaluate the proposal on a more conventional cost-benefit basis on numbers that are not divorced from reality.

Stated somewhat differently, it would take a substantial price spike in gas fuel cost to make the $17/mwH a beneficial deal for ratepayers.

And you say?

Rep30

From: Rep30
Sent: Monday, February 13, 2017 10:22 AM
To: Shawn Kasych (shawn.kasych@ohiohouse.gov); Lehman, Ryan
Subject: FW: ZEN

FYI

From: Rep30
Sent: Monday, February 13, 2017 10:21 AM
To: 'Ty Pine (tpine@firstenergycorp.com)' <tpine@firstenergycorp.com>
Subject: ZEN

My notes of our discussion two weeks ago show that you said gas currently has a $14-19/mwH fuel cost and $1-2/mwH operating cost, while nuclear currently has $7/mwH fuel cost and a $21/mwH operating cost. By my math, the lowest current gas cost is then $15/mwH as against nuclear's $28/mwH, though it could be $21/mwH gas as against $28/mwH nuclear. Either way, the difference of $7-13/mwH is appreciably less than the $17/mwh in your proposal.

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Stated somewhat differently, it would take a substantial price spike in gas fuel cost to make the $17/mwH a beneficial deal for ratepayers.

And you say?

Rep30

From: Rep30
Sent: Tuesday, February 14, 2017 11:10 AM
To: 'Ty Pine (tpine@firstenergycorp.com)'
Subject: ZEN
Attachments: jimmy.wolf2-9-201718-41-28.pdf

Ty—

1. Lines 76-80 make no sense and something is missing.
2. Not clear to me that only the EDU's in FE's territory are participating in this (lines 114-116).
3. Not clear to me that credits are limited to in-state nuclear plants (lines 195-202 and the 4 lines after line 157, but I suppose this is to avoid a Commerce Clause problem).
4. There has to be periodic review of whether $17 is the right number. And $17 may be too high to begin with.

Reviewed As To Form By
Legislative Service Commission

I 132 0606

132nd General Assembly
Regular Session
2017-2018

B. No.

A BILL

To amend section 4928.02 and to enact sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532 ~~and 4928.7533~~ of the Revised Code regarding the zero-emissions nuclear resource program.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 4928.02 be amended and sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532~~, and 4928.7533~~ of the Revised Code be enacted to read as follows:

Sec. 4928.02. It is the policy of this state to do the

following throughout this state:

(A) Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service;

(B) Ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs;

(C) Ensure diversity of ~~electricity~~ the following:

(1) Electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities;

(2) Resources, including zero-emissions nuclear resources as defined in section 4928.75 of the Revised Code, that provide fuel diversity and environmental and other benefits.

(D) Encourage innovation and market access for cost-effective supply- and demand-side retail electric service including, but not limited to, demand-side management, time-differentiated pricing, waste energy recovery systems, smart grid programs, and implementation of advanced metering infrastructure;

(E) Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service and the development of performance standards and targets for service quality for all consumers, including annual achievement reports written in plain language;

(F) Ensure that an electric utility's transmission and distribution systems are available to a customer-generator or owner of distributed generation, so that the customer-generator or owner can market and deliver the electricity it produces;

(G) Recognize the continuing emergence of competitive electricity markets through the development and implementation of flexible regulatory treatment, while simultaneously recognizing the need for nuclear energy resources, as defined in section 4928.75 of the Revised Code, and resources that provide fuel diversity and environmental and other benefits;

(H) Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates;

(I) Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power;

(J) Provide coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates;

(K) Encourage implementation of distributed generation across customer classes through regular review and updating of administrative rules governing critical issues such as, but not limited to, interconnection standards, standby charges, and net metering;

(L) Protect at-risk populations, including, but not

limited to, when considering the implementation of any new advanced energy, ~~including zero-emissions nuclear resources, as defined in section 4928.75 of the Revised Code,~~ or renewable energy resource;

(M) Encourage the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs and alternative energy resources in their businesses;

(N) Facilitate the state's effectiveness in the global economy.

In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state.

Sec. 4928.75. As used in sections 4928.75 to 4928.75323 of the Revised Code:

(A) "Nuclear energy resource" means ~~an entity that owns or operates~~ an electric generation unit fueled, in whole or in part, by nuclear power and licensed by the nuclear regulatory commission.

(B) "PJM" means the PJM Interconnection, L.L.C., or its successor.

(C) "Zero-emissions nuclear credit" means the attributes associated with one megawatt hour of electricity generated by a zero-emissions nuclear resource.

(D) "Zero-emissions nuclear resource" means a nuclear energy resource that ~~is determined by the public utilities commission pursuant to section 4928.757 or 4928.7511 of the~~

~~Revised Code to~~ meets the criteria of section 4928.754 of the Revised Code.

Sec. 4928.751. There is hereby created a zero-emissions nuclear resource program to enable the state to meet its policy goals and requirements under which zero-emissions nuclear credits are purchased by electric distribution utilities to provide long-term energy security and environmental and other benefits to the region and to ~~all~~ retail electric service customers in the state. An electric distribution utility in this state that has a zero-emissions nuclear resource located within its certified territory shall participate in the program. All electric distribution utilities in the same holding company system shall participate jointly and shall allocate costs across all classes of each participating utility's customers.

Sec. 4928.752. The zero-emissions nuclear resource program shall operate for successive two-year program periods beginning with the initial program period ~~ending two years~~commencing on ~~after~~ the effective date of this section.

Sec. 4928.753. To ~~qualify to provide~~ zero-emissions nuclear credits under the zero-emissions nuclear program, an entity that owns or operates a nuclear energy resource shall file with the public utilities commission a written notice verifying~~providing evidence~~ that the resource meets the criteria under section 4928.754 of the Revised Code. The ~~resource~~ entity shall file the written notice not later than ninety days after the commencement of the initial program period or, if the resource has not yet qualified, not later than prior to the commencement of a subsequent program period.

Sec. 4928.754. A nuclear energy resource that satisfies~~shall meet~~ all of the following ~~criteria to qualify as~~ is a zero-emissions nuclear resource for purposes of zero-emissions nuclear credits:

(A) The resource is interconnected within the transmission system of PJM.

(B) PJM has determineda the resource is transmission deliverable under the metrics by which PJM calculates deliverability for purposes of capacity planning on a round-the-clock baseload basis into the ~~Ohio~~ transmission zone or zones of electric distribution utilities participating in the zero-emissions nuclear resource program under sections 4928.75 to 4928.75323 of the Revised Code.

(C)For in-state nuclear energy resources:

(1) The resource has benefited ~~constructively contributed more to~~ the air quality profile of the state ~~in which the resource is located~~ more than the predominant electric generation source ~~in that state~~ with similar capacity and baseload characteristics as the resource as of the time the resource commenced operation.

(~~D~~2) All of the following could occur if the resource ceased operation and its capacity were replaced at the same location by the then predominant electric generation source with similar capacity and baseload characteristics as the resource:

(~~1~~a) The ability of the state, or region of the state ~~in which the resource is located~~, to maintain or decrease existing intensity of fine particulate matter or to comply with one or more state or federal air pollution control programs, standards, or goals is reduced;

(~~2~~b) The carbon dioxide emissions intensity of the state ~~in which the resource is located~~ is negatively impacted;

(~~3~~c) The ability of the state to maintain or decrease existing intensity of carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen oxide or sulfur dioxide ~~in which the resource is located to comply with national ambient air quality for a criteria air pollutant~~ is negatively impacted ~~in a material way~~.

(D) For all other nuclear energy resources, each such resource is shown to provide no less than the same level of environmental benefits to the state as nuclear energy resources located within the state, pursuant to the requirements in division (C) of this section.

(E) The resource, on or after January 1, 2017:

(1) Did not receive from another state tax exemptions, deferrals, exclusions, allowances, payments, credits, deductions, or reimbursements calculated in whole or in part using a metric that provides value for emissions not produced by the resource; or

(2) Is not wholly owned by a municipal or cooperative corporation or a group, association, or consortium of those corporations; or

(3) Did not, during a program period described in section 4928.752 of the Revised Code, recover some or all of the capital or operating costs of the resource through rates regulated by a state.

Sec. 4928.755. With respect to a written notice filed under section 4928.753 of the Revised Code ~~by~~ relating to a nuclear energy resource located in this state, any interested person may file ~~comments~~ with the public utilities commission within twenty days after the written notice was filed.

Sec. 4928.756. An entity that owns or operates a~~A~~ nuclear energy resource may file with the public utilities commission a response to any comment made under section 4928.755 of the Revised Code, not later than ten days after the comment was filed.

Sec. 4928.757. Not later than fifty days after the filing of a written notice under section 4928.753 of the Revised Code ~~by~~ relating to a nuclear energy resource located in this state, the public utilities commission shall designate ~~determine whether~~ a ~~the~~ resource that ~~qualifies~~ satisfies ~~under~~ the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource and issue an order consistent with that ~~determination~~designation. If the commission does not issue an order in the time required by this section, the resource shall be deemed to be a zero-emissions nuclear

resource.

Sec. 4928.7510. With respect to a written notice filed under section 4928.753 of the Revised Code ~~by~~ relating to a nuclear energy resource ~~located in another state~~described in section 4928.754(D), the resource shall submit

with its written notice an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code.

Sec. 4928.7511. The public utilities commission, under a procedure it adopts, shall determine and issue the appropriate order regarding whether a nuclear energy resource ~~located in another state~~ described in section 4928.754(D), qualifies under the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource. At minimum, t~~T~~he adopted procedure shall provide the opportunity for comment and response similar to the opportunities described under sections 4928.755 and 4928.756 of the Revised Code.

Sec. 4928.7513. A nuclear energy resource determined under section 4928.757 or 4928.7511 of the Revised Code to be a zero-emissions nuclear resource shall continue to be considered such a resource for all successive program periods as long as the resource continues to meet the criteria of divisions (A), (B), and (E) of section 4928.754 of the Revised Code.

Sec. 4928.7514. Zero-emission nuclear resources shall provide zero-emissions nuclear credits for the zero-emissions nuclear resource program. Not later than thirty days before a program period commences, each zero-emissions nuclear resource shall confirm with the public utilities commission its intent to continue to commit its credits under the program.

Sec. 4928.7515. All financial statements, financial data, and trade secrets submitted to or received by the public utilities commission for purposes of ~~qualifying~~ satisfying the criteria as a zero-

emissions nuclear resource and any information taken for any purpose from the statements, data, or trade secrets are not public records under section 149.43 of the Revised Code.

Sec. 4928.7520. Not later than sixty days after the initial program period commences and not later than thirty days before a subsequent program period commences, the public utilities commission shall set the price for zero-emissions nuclear credits applicable for the period. For the initial Program period the price shall be seventeen dollars per credit. For each subsequent program period, that price shall be adjusted for inflation using the gross domestic product implicit price deflator as published by the United States department of commerce, bureau of economic analysis, index numbers 2007=100.

Sec. 4928.7521. At the same time the public utilities commission sets the price for zero-emissions nuclear credits, the commission shall determine the maximum number of credits to be purchased by electric distribution utilities during the Program period. The amount the commission sets shall equal one-third of the ~~combined~~ total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report.

Sec. 4928.7522. Not later than seven days following the close of each quarter of a program period, each zero-emissions nuclear resource shall transfer all of its zero-emissions nuclear credits generated that quarter to the public utilities commission, which shall hold the credits ~~in trust~~ for the ~~resoureesole~~ purpose of administering the program.

Sec. 4928.7523. Within seven days of the zero-emissions nuclear resource transferring its credits, t~~T~~he public utilities commission shall notify each participating electric distribution utility of the total amount of zero-emissions nuclear credits received from~~, and hold in trust for,~~ zero-emissions nuclear resources.

Sec. 4928.7524. All participating electric distribution utilities shall purchase all zero-emissions nuclear credits transferred to the public utilities commission up to the maximum number of credits determined under section 4928.7521 of the Revised Code. The commission shall allocate, ~~as needed,~~ the amounts to be purchased by each participating utility based on the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report. Each participating electric distribution utility shall pay the credit price for each credit purchased.

Sec. 4928.7525. The public utilities commission shall deposit all payments for credits into the zero-emissions nuclear resources fund created under section 4928.7532 of the Revised Code.

Sec. 4928.7526. Within seven days of receipt of utility payment, t~~T~~he public utilities commission shall pay to each zero-emissions nuclear resource ~~on a quarterly basis~~ the amount paid for each of the resource's zero-emissions nuclear credits purchased from the zero-emissions nuclear resources fund.

Sec. 4928.7527. Credits purchased by participating electric distribution utilities may not be transferred, sold, or assigned to any other entity.

Sec. 4928.7530. Each participating electric distribution utility shall recover any and all direct and indirect costs for ~~its~~ the purchase of zero-emissions nuclear credits through a nonbypassable rider charged to all of its retail electric service customers which shall be established within 60 days from the effective date of this section.

Sec. 4928.7532. There is hereby created the zero-emissions nuclear resources fund that shall be in the custody of the treasurer of state but shall not be part of the state treasury. The fund shall consist of all money collected by the public utilities commission from purchases of zero-emissions nuclear

credits. The amounts deposited into the fund shall be used to pay the credit purchase price to the resources that generated the credits. All investment earnings from the fund shall be transferred by the treasurer to the general revenue fund in the state treasury.

~~Sec. 4928.7533. The public utilities commission shall adopt all rules necessary for the operation of the zero-emissions nuclear resource program.~~

Section 2. That existing section 4928.02 of the Revised Code is hereby repealed.

Rep30

From: Wolf, Jimmy
Sent: Tuesday, February 21, 2017 7:54 AM
To: 'Ty Pine (tpine@firstenergycorp.com)'
Subject: Draft Bill
Attachments: I_132_0723.pdf; L0723-CL-132.pdf

Good Morning Ty,

I hope you had a good weekend.

Attached is the draft of the ZEN bill. LSC also provided a cover letter stating some potential problems with the bill draft. I will be showing this to Rep. Seitz today once he arrives in Columbus.

Best,

Jimmy Wolf
Legislative Aide to Representative Bill Seitz
30th House District
614.466.8258
Jimmy.wolf@ohiohouse.gov

Reviewed As To Form By
Legislative Service Commission

I_132_0723

132nd General Assembly
Regular Session
2017-2018

. B. No.

A BILL

To amend section 4928.02 and to enact sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532 of the Revised Code regarding the zero-emissions nuclear resource program.

BE IT ENACTED BY THE GENERAL ASSEMBLY OF THE STATE OF OHIO:

Section 1. That section 4928.02 be amended and sections 4928.75, 4928.751, 4928.752, 4928.753, 4928.754, 4928.755, 4928.756, 4928.757, 4928.7510, 4928.7511, 4928.7513, 4928.7514, 4928.7515, 4928.7520, 4928.7521, 4928.7522, 4928.7523, 4928.7524, 4928.7525, 4928.7526, 4928.7527, 4928.7530, and 4928.7532 of the Revised Code be enacted to read as follows:

Sec. 4928.02. It is the policy of this state to do the following throughout this state:

(A) Ensure the availability to consumers of adequate, reliable, safe, efficient, nondiscriminatory, and reasonably priced retail electric service;

(B) Ensure the availability of unbundled and comparable retail electric service that provides consumers with the supplier, price, terms, conditions, and quality options they elect to meet their respective needs;

(C) Ensure diversity of ~~electricity~~ the following:

(1) Electricity supplies and suppliers, by giving consumers effective choices over the selection of those supplies and suppliers and by encouraging the development of distributed and small generation facilities;

(2) Resources, including zero-emissions nuclear resources as defined in section 4928.75 of the Revised Code, that provide fuel diversity and environmental and other benefits.

(D) Encourage innovation and market access for cost-effective supply- and demand-side retail electric service including, but not limited to, demand-side management, time-differentiated pricing, waste energy recovery systems, smart grid programs, and implementation of advanced metering infrastructure;

(E) Encourage cost-effective and efficient access to information regarding the operation of the transmission and distribution systems of electric utilities in order to promote both effective customer choice of retail electric service and the development of performance standards and targets for service quality for all consumers, including annual achievement reports written in plain language;

(F) Ensure that an electric utility's transmission and

distribution systems are available to a customer-generator or owner of distributed generation, so that the customer-generator or owner can market and deliver the electricity it produces;

(G) Recognize the continuing emergence of competitive electricity markets through the development and implementation of flexible regulatory treatment, while simultaneously recognizing the need for nuclear energy resources, as defined in section 4928.75 of the Revised Code, and resources that provide fuel diversity and environmental and other benefits;

(H) Ensure effective competition in the provision of retail electric service by avoiding anticompetitive subsidies flowing from a noncompetitive retail electric service to a competitive retail electric service or to a product or service other than retail electric service, and vice versa, including by prohibiting the recovery of any generation-related costs through distribution or transmission rates;

(I) Ensure retail electric service consumers protection against unreasonable sales practices, market deficiencies, and market power;

(J) Provide coherent, transparent means of giving appropriate incentives to technologies that can adapt successfully to potential environmental mandates;

(K) Encourage implementation of distributed generation across customer classes through regular review and updating of administrative rules governing critical issues such as, but not limited to, interconnection standards, standby charges, and net metering;

(L) Protect at-risk populations, including, but not limited to, when considering the implementation of any new

advanced energy or renewable energy resource;

(M) Encourage the education of small business owners in this state regarding the use of, and encourage the use of, energy efficiency programs and alternative energy resources in their businesses;

(N) Facilitate the state's effectiveness in the global economy.

In carrying out this policy, the commission shall consider rules as they apply to the costs of electric distribution infrastructure, including, but not limited to, line extensions, for the purpose of development in this state.

Sec. 4928.75. As used in sections 4928.75 to 4928.7532 of the Revised Code:

(A) "Nuclear energy resource" means an electric generation unit fueled, in whole or in part, by nuclear power and licensed by the nuclear regulatory commission.

(B) "PJM" means the PJM Interconnection, L.L.C., or its successor.

(C) "Zero-emissions nuclear credit" means the attributes associated with one megawatt hour of electricity generated by a zero-emissions nuclear resource.

(D) "Zero-emissions nuclear resource" means a nuclear energy resource that meets the criteria of section 4928.754 of the Revised Code.

Sec. 4928.751. There is hereby created a zero-emissions nuclear resource program to enable the state to meet its policy goals and requirements under which zero-emissions nuclear credits are purchased by electric distribution utilities to

provide long-term energy security and environmental and other benefits to the region and to retail electric service customers in the state. An electric distribution utility in this state that has a zero-emissions nuclear resource located within its certified territory shall participate in the program. All electric distribution utilities in the same holding company system shall participate jointly and shall allocate costs across all classes of each participating utility's customers.

Sec. 4928.752. The zero-emissions nuclear resource program shall operate for successive two-year program periods beginning with the initial program period commencing on the effective date of this section.

Sec. 4928.753. To provide zero-emissions nuclear credits under the zero-emissions nuclear program, an entity that owns or operates a nuclear energy resource shall file with the public utilities commission a written notice verifying that the resource meets the criteria under section 4928.754 of the Revised Code. The entity shall file the written notice not later than ninety days after the commencement of the initial program period or, if the resource has not yet qualified, not later than prior to the commencement of a subsequent program period.

Sec. 4928.754. A nuclear energy resource that satisfies all of the following criteria is a zero-emissions nuclear resource for purposes of zero-emissions nuclear credits:

(A) The resource is interconnected within the transmission system of PJM.

(B) PJM determines the resource is transmission deliverable under the metrics by which PJM calculates deliverability for purposes of capacity planning on a round-the-

clock baseload basis into the transmission zone or zones of electric distribution utilities participating in the zero-emissions nuclear resource program under sections 4928.75 to 4928.7532 of the Revised Code.

(C) For in-state nuclear energy resources:

(1) The resource has benefited the air quality profile of the state more than the predominant electric generation source with similar capacity and baseload characteristics as the resource as of the time the resource commenced operation.

(2) All of the following could occur if the resource ceased operation and its capacity were replaced at the same location by the then predominant electric generation source with similar capacity and baseload characteristics as the resource:

(a) The ability of the state, or region of the state, to maintain or decrease existing intensity of fine particulate matter or to comply with one or more state or federal air pollution control programs, standards, or goals is reduced.

(b) The carbon dioxide emissions intensity of the state is negatively impacted.

(c) The ability of the state to maintain or decrease existing intensity of carbon monoxide, lead, ground-level ozone, particulate matter, nitrogen oxide, or sulfur dioxide is negatively impacted.

(D) For all other nuclear energy resources, each such resource is shown to provide no less than the same level of environmental benefits to the state as nuclear energy resources located within the state, pursuant to the requirements in division (C) of this section.

(E) The resource, on or after January 1, 2017:

(1) Did not receive from another state tax exemptions, deferrals, exclusions, allowances, payments, credits, deductions, or reimbursements calculated in whole or in part using a metric that provides value for emissions not produced by the resource;

(2) Is not wholly owned by a municipal or cooperative corporation or a group, association, or consortium of those corporations; or

(3) Did not, during a program period described in section 4928.752 of the Revised Code, recover some or all of the capital or operating costs of the resource through rates regulated by a state.

Sec. 4928.755. With respect to a written notice filed under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, any interested person may file comments with the public utilities commission within twenty days after the written notice was filed.

Sec. 4928.756. An entity that owns or operates a nuclear energy resource may file with the public utilities commission a response to any comment made under section 4928.755 of the Revised Code, not later than ten days after the comment was filed.

Sec. 4928.757. Not later than fifty days after the filing of a written notice under section 4928.753 of the Revised Code relating to a nuclear energy resource located in this state, the public utilities commission shall designate a resource that satisfies the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource and issue an order

consistent with that designation. If the commission does not issue an order in the time required by this section, the resource shall be deemed to be a zero-emissions nuclear resource.

Sec. 4928.7510. With respect to a written notice filed under section 4928.753 of the Revised Code by a nuclear energy resource described in division (D) of section 4928.754 of the Revised Code, the resource shall submit with its written notice an environmental study showing that the resource meets the criteria under section 4928.754 of the Revised Code.

Sec. 4928.7511. The public utilities commission, under a procedure it adopts, shall determine and issue the appropriate order regarding whether a nuclear energy resource described in division (D) of section 4928.754 of the Revised Code qualifies under the criteria in section 4928.754 of the Revised Code as a zero-emissions nuclear resource. At minimum, the adopted procedure shall provide the opportunity for comment and response similar to the opportunities described under sections 4928.755 and 4928.756 of the Revised Code.

Sec. 4928.7513. A nuclear energy resource determined under section 4928.757 or 4928.7511 of the Revised Code to be a zero-emissions nuclear resource shall continue to be considered such a resource for all successive program periods as long as the resource continues to meet the criteria of divisions (A), (B), and (E) of section 4928.754 of the Revised Code.

Sec. 4928.7514. Zero-emission nuclear resources shall provide zero-emissions nuclear credits for the zero-emissions nuclear resource program. Not later than thirty days before a program period commences, each zero-emissions nuclear resource shall confirm with the public utilities commission its intent to

continue to commit its credits under the program.

Sec. 4928.7515. All financial statements, financial data, and trade secrets submitted to or received by the public utilities commission for purposes of satisfying the criteria as a zero-emissions nuclear resource and any information taken for any purpose from the statements, data, or trade secrets are not public records under section 149.43 of the Revised Code.

Sec. 4928.7520. Not later than sixty days after the initial program period commences and not later than thirty days before a subsequent program period commences, the public utilities commission shall set the price for zero-emissions nuclear credits applicable for the period. For the initial program period the price shall be seventeen dollars per credit. For each subsequent program period, that price shall be adjusted for inflation using the gross domestic product implicit price deflator as published by the United States department of commerce, bureau of economic analysis, index numbers 2007=100.

Sec. 4928.7521. At the same time the public utilities commission sets the price for zero-emissions nuclear credits, the commission shall determine the maximum number of credits to be purchased by electric distribution utilities during the program period. The amount the commission sets shall equal one-third of the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report.

Sec. 4928.7522. Not later than seven days following the close of each quarter of a program period, each zero-emissions nuclear resource shall transfer all of its zero-emissions nuclear credits generated that quarter to the public utilities

commission, which shall hold the credits for the sole purpose of administering the program.

Sec. 4928.7523. Within seven days of the zero-emissions nuclear resource transferring its credits, the public utilities commission shall notify each participating electric distribution utility of the total amount of zero-emissions nuclear credits received from zero-emissions nuclear resources.

Sec. 4928.7524. All participating electric distribution utilities shall purchase all zero-emissions nuclear credits transferred to the public utilities commission up to the maximum number of credits determined under section 4928.7521 of the Revised Code. The commission shall allocate the amounts to be purchased by each participating utility based on the total "Total End User Consumption" in megawatt-hours over the previous two calendar years as shown on PUCO Form D1 of each participating electric distribution utility's most recently filed long-term forecast report. Each participating electric distribution utility shall pay the credit price for each credit purchased.

Sec. 4928.7525. The public utilities commission shall deposit all payments for credits into the zero-emissions nuclear resources fund created under section 4928.7532 of the Revised Code.

Sec. 4928.7526. Within seven days of receipt of utility payment, the public utilities commission shall pay to each zero-emissions nuclear resource the amount paid for each of the resource's zero-emissions nuclear credits purchased from the zero-emissions nuclear resources fund.

Sec. 4928.7527. Credits purchased by participating

electric distribution utilities may not be transferred, sold, or assigned to any other entity.

Sec. 4928.7530. Each participating electric distribution utility shall recover any and all direct and indirect costs for the purchase of zero-emissions nuclear credits through a nonbypassable rider charged to all of its retail electric service customers, which rider shall be established within sixty days from the effective date of this section.

Sec. 4928.7532. There is hereby created the zero-emissions nuclear resources fund that shall be in the custody of the treasurer of state but shall not be part of the state treasury. The fund shall consist of all money collected by the public utilities commission from purchases of zero-emissions nuclear credits. The amounts deposited into the fund shall be used to pay the credit purchase price to the resources that generated the credits. All investment earnings from the fund shall be transferred by the treasurer to the general revenue fund in the state treasury.

Section 2. That existing section 4928.02 of the Revised Code is hereby repealed.

OHIO LEGISLATIVE SERVICE COMMISSION

Clifford A. Rosenberger, Speaker of the House

Larry Obhof, President of the Senate

Mark Flanders
Director

L-132-0723

February 17, 2017

The Honorable William Seitz
Ohio House of Representatives
Statehouse
Columbus, OH 43215

Dear Representative Seitz:

You asked LSC staff to draft a newer version of l_132_0606 for you with changes from an interested party. Your aide told us to draft the language "as is" even though you are aware that there are some problems with the language. The resulting bill (l_132_0723) is attached.

As you review the bill, please note that the bill's potential problems include the following:

- The bill's criteria for determining a zero-emissions nuclear resource (R.C. 4928.754) includes a false distinction between nuclear energy resources (ZENR) that are in-state and all other nuclear energy resources (presumably "out-of-state" resources). The standards for both are the same. While this approach may meet the intent of the requestor, the bill's efficacy may be compromised. First, it creates ambiguity because a ZENR must meet all of the criteria of R.C. 4928.754. But, the false distinction makes that impossible since all the criteria must be met, which requires the nuclear energy resource to be in both the in-state category *and* the all other category. The result will cause confusion in application of the most important element of the bill. Secondly, the bill references the "all other nuclear energy resources" portion of the ZENR criteria to identify a nuclear energy resource for determining whether the resource qualifies under the criteria. This has an element of circularity that can lead to misinterpretation.

- R.C. 4928.757 requires the Public Utilities Commission to designate an in-state nuclear energy resource as a ZENR no later than 50 days after filing. If the Commission doesn't so designate in that time period, the resource is deemed a ZENR. This language makes it clear that the Commission really has no duties here--it *must designate all in-state facilities that file*. But, that conclusion would be at odds with the logical assumption that some consideration must be made as to whether the resource meets the bill's criteria. If the intent is that the entity's filing is all the evidence needed to prove the criteria are met, the bill could avoid misinterpretation by simply declaring all in-state nuclear energy resources for which a filing is made are ZENRs. You may also want to consider whether filings are even necessary and simply state that all in-state resources are ZENRs for purposes of the zero-emissions nuclear credit (ZENC) part of the bill. You could save any Commission duties regarding ZENR review for all the other resources.

- To qualify as a ZENR, a nuclear energy resource must *satisfy* the ZENR criteria. All other nuclear energy resources (not the in-state resources), however, must *qualify* under the ZENR criteria as the Commission *determines* (R.C. 4928.7511). In addition, the ZENC requirements regarding exclusion of information from public records only addresses information submitted to *satisfy* ZENR requirements (R.C. 4928.7515). The difference in language could lead to misinterpretation.

- With respect to the various seven-day time periods regarding the ZENC provisions of the bill, "not later than" and "within" are both used (R.C. 4928.7522, 4928.7523, and 4928.7526). Consistency in usage may avoid misinterpretation in the future.

Please contact me at (614) 644-7788 or brian.malachowsky@lsc.ohio.gov if you have any questions or concerns.

Sincerely,

Brian D. Malachowsky

Brian D. Malachowsky
Research Associate

mm

Attachment: l_132_0723