

The Florida Senate
BILL ANALYSIS AND FISCAL IMPACT STATEMENT

(This document is based on the provisions contained in the legislation as of the latest date listed below.)

Prepared By: The Professional Staff of the Committee on Community Affairs

BILL: CS/CS/SB 1472

INTRODUCER: Community Affairs Committee; Communications, Energy, and Public Utilities Committee; and Senator Legg and others

SUBJECT: Nuclear and Integrated Gasification Combined Cycle Power Plants

DATE: April 16, 2013 **REVISED:** _____

	ANALYST	STAFF DIRECTOR	REFERENCE	ACTION
1.	Wiehle	Caldwell	CU	Fav/CS
2.	Toman	Yeatman	CA	Fav/CS
3.	_____	_____	_____	_____
4.	_____	_____	_____	_____
5.	_____	_____	_____	_____
6.	_____	_____	_____	_____

Please see Section VIII. for Additional Information:

- | | | |
|------------------------------|-------------------------------------|---|
| A. COMMITTEE SUBSTITUTE..... | <input checked="" type="checkbox"/> | Statement of Substantial Changes |
| B. AMENDMENTS..... | <input type="checkbox"/> | Technical amendments were recommended |
| | <input type="checkbox"/> | Amendments were recommended |
| | <input type="checkbox"/> | Significant amendments were recommended |

I. Summary:

CS/CS/SB 1472 revises the cost recovery provisions for the siting, design, licensing and construction of nuclear and integrated gasification combined cycle power plants in the following ways:

- provides that the allowance for funds used during construction (AFUDC) rate is the rate in effect at the time the increment of cost is incurred and recovery is sought,
- establishes a process for review and approval by the Public Service Commission (PSC) before a utility continues with specified steps in developing a new power plant for which it is obtaining early cost recovery, and
- requires that the PSC conduct a comprehensive review of any proposed nuclear power plant that meets specified conditions and for which early cost recovery has been authorized.

This bill substantially amends section 366.93 of the Florida Statutes.

II. Present Situation:

Section 366.93, F.S., was enacted in 2006. The statute provides the following definitions.

- “Cost” includes, but is not limited to, “all capital investments, including rate of return, any applicable taxes, and all expenses, including operation and maintenance expenses, related to or resulting from the siting, licensing, design, construction, or operation of the nuclear power plant, including new, expanded, or relocated electrical transmission lines or facilities of any size that are necessary thereto, or of the integrated gasification combined cycle power plant.”
- “Preconstruction” is “that period of time after a site, including any related electrical transmission lines or facilities, has been selected through and including the date the utility completes site clearing work. Preconstruction costs shall be afforded deferred accounting treatment and shall accrue a carrying charge equal to the utility’s AFUDC rate until recovered in rates (by implication, everything after completion of site clearing is construction).”

The statute requires the Public Service Commission (PSC) to establish, by rule, alternative cost recovery mechanisms designed to promote utility investment in nuclear power plants and to allow for the recovery in rates of all prudently incurred costs. The mechanisms must include:

- Recovery through the capacity cost recovery clause of any preconstruction costs.
- Recovery through an incremental increase in the utility’s capacity cost recovery clause rates of the carrying costs on the utility’s projected construction cost balance associated with the nuclear or integrated gasification combined cycle power plant. To encourage investment and provide certainty, for nuclear or integrated gasification combined cycle power plant need petitions submitted on or before December 31, 2010, associated carrying costs shall be equal to the pretax AFUDC in effect upon this act becoming law. For nuclear or integrated gasification combined cycle power plants for which need petitions are submitted after December 31, 2010, the utility’s existing pretax AFUDC rate is presumed to be appropriate unless determined otherwise by the commission in the determination of need for the nuclear or integrated gasification combined cycle power plant.

Thus, under this section, the utility recovers all preconstruction costs in full as they are incurred, but recovers only the carrying charges on construction costs.¹ Generally, this means that non-capital costs and the interest on capital costs will be recovered in advance of the plant becoming operational.

The preconstruction phase includes both licensing and preconstruction. Examples of activities performed during this combined phase include:

- site selection and purchase;
- filing of the combined construction and operating license (COL) application with the Nuclear Regulatory Commission (NRC);
- obtaining the determination of need from the PSC;
- execution of the engineering, procurement, and construction (EPC) agreement;
- obtaining the state site certification;
- the U.S. NRC Safety Review, a multi-phase process;
- the U.S. EPA Environmental Review, also a multi-phase process; and

¹ For any recovery to occur, the PSC must make a finding that the costs were prudently incurred (s. 366.93(2), F.S.).

- hearings before the Atomic Safety & Licensing Board and the NRC Commissioners to obtain the COL.²

Licensing phase costs will constitute approximately 1 percent of total project costs recovered.³ Preconstruction phase costs will constitute approximately 2-5 percent of total project costs recovered.⁴ Estimated amounts will vary by project size and duration.⁵

Examples of costs incurred during the construction phase include: major equipment, materials, labor, and construction management.⁶ During the construction phase, only the carrying costs are recovered: these costs will constitute approximately 8-10 percent of total project costs recovered.⁷

Until the nuclear plant becomes commercially operational, the utility must annually report to the PSC the budgeted and actual costs compared to the in-service cost of the nuclear power plant as estimated by the utility during the determination of need hearing.

When the nuclear power plant becomes operational and is placed in commercial service, the utility may increase its base rate charges by the projected annual revenue requirements of the nuclear power plant.

If the utility either elects not to complete or is precluded from completing construction of the nuclear power plant, it must be allowed to recover all prudent preconstruction and construction costs incurred following the commission's issuance of a final order granting a determination of need.

The statute provides for advanced, or early, cost recovery in that the utility recovers some costs earlier under the statute than it would under traditional recovery. Under traditional recovery of the costs related to constructing a power plant, the utility fronts the money to pay these costs by providing the initial funding for the project through money it holds for capital projects or by raising capital through borrowing or selling stock, and does not begin to recover any costs until the plant is placed into operation. Under s. 366.93, F.S., the utility still fronts the money, but it begins to recover some costs earlier, those being all preconstruction costs and the carrying costs on the utility's projected construction cost balance that is associated with the nuclear power plant. One arguable benefit of this advanced recovery is that the carrying costs, primarily interest, may not be as high and do not accumulate and compound in the time period until the plant is placed into operation, which may be as long as 17-20 years from the time the first costs are incurred. By recovering these costs earlier, the increase in rates when the plant is placed into operation and recovery of capital costs begins is also significantly reduced. One past estimate of

² Statement of Alex Glenn, State President, Progress Energy Florida, before the Florida Senate Committee on Communications, Energy, and Public Utilities (March 18, 2013).

³ Statement of Steven Scroggs, Senior Director, Nuclear Development, Florida Power & Light Company, before the Florida Senate Committee on Communications, Energy, and Public Utilities (March 18, 2013).

⁴ *Id.*

⁵ *Id.*

⁶ *Id.*

⁷ *Id.*

the impact on the monthly bill was that the statute would reduce the amount of this increase by \$3.44, from \$8.91 to \$5.47.⁸

There were other potential incentives for enacting the statute, including the following.

- Florida's population was growing quickly, as was the related demand for electricity.⁹
- Natural gas was increasingly the fuel of choice for generating electricity and concern was growing about over-dependence on one fuel type.¹⁰ In 1980, natural gas was the fuel for approximately 15 percent of the electricity generation in Florida; in 2010, it was over 50 percent.¹¹ Florida is in the top quartile of states in its reliance on natural gas.¹²
- Natural gas prices were high and spot market prices were fluctuating greatly.¹³
- Florida had just been through the extremely bad, back-to-back hurricane seasons of 2004 and 2005, which had interrupted natural gas deliveries to Florida and the power plants.¹⁴
- The federal government was considering potential limitations on carbon emissions due to concerns about climate change, which would have hit coal-fired plants hard, decreasing their output, increasing the expense of production, or both.¹⁵

However, circumstances have changed since 2006.

- Florida's real estate market collapsed and the resulting recession significantly reduced the demand for electricity.¹⁶
- With the advent of fracking, the supply of natural gas has increased and prices have decreased and stabilized.¹⁷

III. Effect of Proposed Changes:

The changes made by the bill can be placed in three categories:

- Changing the applicable AFUDC rate;
- Creating a series of project reviews by the PSC; and
- Requiring a comprehensive review by the PSC of projects meeting specified criteria.

⁸ Statement of Jeff Lyash, President and CEO, Progress Energy Florida, before the Florida Senate Committee on Communications and Public Utilities (January 13, 2009).

⁹ *Supra*, note 2, PowerPoint slides 6 and 7.

¹⁰ The same legislation that created the early cost recovery statute (s. 44, Ch. 2006-230, Laws of Florida) also: required that the PSC, in reviewing utilities' 10-year site plans, consider the effect of the plan on fuel diversity within the state (s. 15, Ch. 2006-234, Laws of Florida, amending s. 186.801(2), F.S.); authorized the PSC to require installation of necessary generating plants if it determined that there is probable cause to believe that inadequacies exist with respect to the electric grid, including inadequacies in fuel diversity or fuel supply reliability (s. 17, Ch. 2006-230, Laws of Florida, amending s. 366.05(8), F.S.); and required that when the PSC determines the need for a proposed power plant, it must consider the need for fuel diversity and supply reliability (s. 43, Ch. 2006-230, Laws of Florida, amending s. 403.519, F.S.).

¹¹ *Supra*, note 2, PowerPoint slide 10.

¹² *Supra*, note 2, PowerPoint slide 11.

¹³ *Supra*, note 2, PowerPoint slides 12 and 13.

¹⁴ *Id.*

¹⁵ *Supra*, note 2, PowerPoint slide 8.

¹⁶ *Supra*, note 2, PowerPoint slides 5, 6, and 7.

¹⁷ *Supra*, note 2, PowerPoint slide 13.

AFUDC – Rate of Return

The bill changes the applicable AFUDC rate used during construction. The AFUDC rate is a method of allowing a utility to recover its costs of raising capital. It includes both a debt component (for borrowed funds for interest paid on bonds and short-term debt) and an equity component (for common and preferred equity funds used to support a project's construction). These components are weighted to determine that utility's overall cost of capital at that time.¹⁸

Under traditional cost recovery, the AFUDC charge accumulates until the plant becomes operational and cost recovery begins. Under the current statute, prior to the plant becoming operational, the utility recovers preconstruction costs in full (therefore, an AFUDC rate rarely accrues), and recovers only the carrying charges, the AFUDC rate, on construction costs. In practice, there will be very few, if any, occasions for an AFUDC rate to apply to preconstruction costs; it will apply almost exclusively to construction costs. As stated above, the AFUDC rate represents the utility's cost of raising capital and has two components, debt and equity. These components reflect interest costs and a rate of return, respectively. The reasons the AFUDC rate will rarely, if ever, apply to preconstruction costs are 1) these costs are recovered in full as they are incurred, so no interest accumulates (the debt component), and 2) they will include very few, if any, capital costs on which to earn a rate of return (the equity component). In contrast, construction costs will not be recovered until the plant becomes operational, so interest would accrue if not for the early cost recovery statute, and the construction costs will include most, if not all, of the capital costs, the investments in brick and mortar capital investments on which a rate of return is allowed.¹⁹

The current statute provides:

To encourage investment and provide certainty, for nuclear or integrated gasification combined cycle power plant need petitions submitted on or before December 31, 2010, associated carrying costs must be equal to the pretax AFUDC in effect upon this act becoming law. For nuclear or integrated gasification combined cycle power plants for which need petitions are submitted after December 31, 2010, the utility's existing pretax AFUDC rate is presumed to be appropriate unless determined otherwise by the commission in the determination of need for the nuclear or integrated gasification combined cycle power plant.

The "pretax AFUDC in effect upon this act becoming law" was 8.84 percent for Progress Energy Florida (PEF) and 7.42 percent for Florida Power and Light (FPL).²⁰ As was stated above, the AFUDC rate consists of two portions, equity and interest. The interest portion was each utility's average interest rate at the time. The equity portion for each was 11.5 percent. The two components were weighted to determine the total percentage rate.

The bill changes this language to:

¹⁸ See, Public Service Commission, *Florida's Electric Utilities: A Reference Guide*, Revised 1994 Edition, pages 2-3.

¹⁹ Telephone conversation between Committee on Communications, Energy and Public Utilities staff and Mark Futrell and Marshall Willis, Public Service Commission staff, (Feb. 15, 2013).

²⁰ These are the two utilities that are developing nuclear power projects and have sought advance cost recovery under the statute. FPL did "uprates" or expansions at an existing nuclear power plant; both are pursuing new units.

To encourage investment and provide certainty, associated carrying costs must be equal to the most recently approved pretax AFUDC at the time an increment of cost recovery is sought.

The current AFUDC rates are 7.44 percent for PEF and 6.41 percent for FPL; they are less than the 2006 levels due to a decrease in both components, that is, decreased interest costs and decreased rate of return on capital investments.²¹ Thus, under current conditions, the bill would lower the AFUDC rate for each utility to fit its current circumstances. If either component of a utility's AFUDC rate increases in the future above its 2006 level (that is, if its interest rates for debt or its allowed rate of return increases), the applicable AFUDC rate could increase to above the 2006 level.

PSC Project Review

The bill creates a schedule for a series of PSC reviews of a power plant project, splitting the preconstruction phase into licensing and other preconstruction work.²²

During the licensing phase, while a utility seeks to obtain a combined license from the Nuclear Regulatory Commission for a nuclear power plant or a certification for an integrated gasification combined cycle power plant, the utility may recover only costs related to, or necessary for, obtaining the license or certificate.

After obtaining the license or certificate, the utility must petition the PSC for approval before proceeding with preconstruction work beyond those activities necessary to maintain a license or certificate. The only costs a utility may recover before obtaining PSC approval are those that are previously approved or necessary to maintain the license or certification. For the PSC to approve preconstruction work on a plant, it must determine that:

- There is still a need for the plant; and
- The projected costs for the plant are reasonable and prudent.

During post-licensing or post-certification preconstruction work, the utility must petition the commission for approval of any preconstruction materials or equipment purchases that exceed 1 percent of the total projected cost for the project.²³

Before beginning the construction phase, a utility must petition the PSC for approval to do so. The only costs that a utility may recover before beginning construction work are those that are

²¹ *Supra*, note 19.

²² Although Alex Glenn's testimony divided the preconstruction phase into licensing and other preconstruction work and expenses, he also indicated that this was not two separate processes, that both were pursued somewhat simultaneously. As such, it is uncertain how recovery of some costs will compare between the current statute and the procedure established in the bill. A specific example of this uncertainty is discussed in note 23.

²³ Steven Scroggs stated in his presentation that there is such a backlog on some large pieces of equipment that a utility has to order them 5-6 years before they are actually needed to have them when they are needed in the construction process. PSC staff indicated that the PSC allowed both utilities to pre-order and put down a deposit on a boiler that can only be obtained from one manufacturer worldwide, and to recover this deposit during preconstruction. The bill appears to allow such a pre-order, with PSC approval required if the cost threshold is met, but with the cost of the deposit not recovered until after PSC approval to begin construction is obtained and construction actually begins. However, it is uncertain how it actually will be implemented.

previously approved or necessary to maintain the license or certification. For the commission to approve proceeding with construction on a plant, it must determine that:

- There is still a need for the plant; and
- The projected costs for the plant are reasonable.

A utility must begin construction of a plant within ten years after the date on which it obtains a combined license or a certification or it must petition the PSC to preserve the opportunity for future recovery under this section for costs relating to that plant. To preserve this cost recovery opportunity, the PSC commission must determine whether the utility remains intent on building the plant. If the PSC finds that the utility remains intent on building the plant, the utility retains the ability to recover costs under this section. If the commission finds a lack of such intent, it may enter an order prohibiting recovery of any future costs relating to the plant, notwithstanding any other provision of law.

A utility must begin construction within 20 years after the date on which it obtains a combined license or a certification or it may not recover future costs relating to that plant under this or another section, notwithstanding any other provision of law.

If a utility elects not to complete the construction of a nuclear power plant, the utility may not recover or retain any rate of return. Any cost recovery after the date of the decision may not include a rate of return. The utility shall refund to its customers the costs recovered before the date of the decision which are attributable to a recovery of a rate of return.

Comprehensive Review

Section 2 of the bill requires that the PSC conduct a comprehensive review of the continuing prudence, cost effectiveness, and need for any proposed nuclear power plant for which early cost recovery under s. 366.93, F.S., has been authorized:

- if the currently anticipated in-service date for the plant has been extended more than 6 years beyond the original proposed in-service date, and
- if the most recent estimate of the plant's total cost has increased by more than 50 percent of the original cost estimate for the plant.

In making its determination, the PSC must consider all relevant factors, including, but not limited to:

- the utility's need for the plant,
- technology and fuel choices,
- applicable federal and state licensing and permitting factors, and
- short- and long-term costs to ratepayers.

The review must begin on or before June 1, 2013, and be completed by February 1, 2014.

Based on its review, the commission must determine whether to authorize early cost recovery for any new or future costs for which cost recovery has not already been authorized.

Effective Date

The bill takes effect July 1, 2013.

IV. Constitutional Issues:**A. Municipality/County Mandates Restrictions:**

Not applicable; this bill does not require counties or municipalities to spend funds or take action requiring the expenditure of funds; reduce the authority that counties or municipalities have to raise revenues in the aggregate; or reduce the percentage of state tax shared with counties or municipalities.

B. Public Records/Open Meetings Issues:

Not applicable; this bill does not have any effect on public records or open meetings.

C. Trust Funds Restrictions:

Not applicable; this bill does not relate to or have any effect on trust funds.

V. Fiscal Impact Statement:**A. Tax/Fee Issues:**

None; the bill has no effect on taxes or fees.

B. Private Sector Impact:

The bill will have the following economic impacts on the utilities recovering costs under this statute and their ratepayers.

- The bill applies an AFUDC rate that is based upon the circumstances at the time the cost is incurred. This will always allow each utility to recover all interest costs and a rate of return that is fair and reasonable at the time the cost is incurred. With current AFUDC rates lower than those in effect on June 19, 2006, when the original cost recovery bill became law, the applicable rate --- and the total costs to the utility's customers --- would decrease as a result of CS/SB 1472. *However*, if the total amount of the AFUDC components increase beyond those of the 2006 rates, both the applicable rate and the costs to ratepayers would increase beyond the amounts currently established in the statute.
- The PSC review and approval process will provide protection for ratepayers throughout the development of a power plant for which early cost recovery is being obtained, while not providing significant delay or burden on a utility. The timing on recovery of some costs may be different under the current statute and the bill. In the event that a utility elects not to complete construction of a nuclear power plant, customers will receive specified refunds.

C. Government Sector Impact:

None.

VI. Technical Deficiencies:

On lines 186-188, the bill requires that the PSC comprehensive review of a proposed power plant meeting specified criteria commence on or before June 1, 2013. However, as the bill does not take effect until July 1, 2013, the requirement to do the review is not effective until that later date.

VII. Related Issues:

None.

VIII. Additional Information:

A. **Committee Substitute – Statement of Substantial Changes:**
(Summarizing differences between the Committee Substitute and the prior version of the bill.)

CS/CS by Community Affairs on April 16, 2013:

- Provides that the PSC must determine that the projected costs for a power plant are prudent; and
- Provides that a utility that elects not to complete the construction of a nuclear power plant may not recover or retain any rate of return for related costs.

CS by Communications, Energy, and Public Utilities on April 8, 2013:

- Deletes the provisions on the automatic repeal and the related reporting requirement;
- Deletes the prohibition on a utility that chooses not to complete a plant recovering or retaining a rate of return;
- Establishes a procedure and a schedule for the Public Service Commission to review and approve continuation of early cost recovery on a project; and
- Requires that the Public Service Commission conduct a comprehensive review of any proposed nuclear power plant that meets specified conditions and for which early cost recovery has been authorized for the purpose of determining whether to authorize early cost recovery for any new or future costs for which cost recovery has not already been authorized.

B. Amendments:

None.