



Legislative Fiscal Bureau

One East Main, Suite 301 • Madison, WI 53703 • (608) 266-3847 • Fax: (608) 267-6873
Email: fiscal.bureau@legis.wisconsin.gov • Website: <http://legis.wisconsin.gov/lfb>

June 1, 2023

Joint Committee on Finance

Paper #666

Engineering Modeling Software (Public Service Commission -- Departmentwide and Utility Regulation)

[LFB 2023-25 Budget Summary: Page 520, #4]

CURRENT LAW

The Public Service Commission (PSC) is responsible for verifying modeling data from utilities and independent service operators (ISOs) for generation, transmission, and economic planning. PSC's Office of Regional Markets (ORM) monitors state participation in the regional transmission system operated by the Midcontinent Independent System Operator (MISO), which operates the electric grid in Wisconsin and throughout the central United States. ORM represents the interests of Wisconsin ratepayers and utilities in ensuring: (a) the reliability of Wisconsin's electric system; (b) adequate electric transmission lines and generation; and (c) the fair and efficient operation of MISO.

PSC also provides certificates of authority (CA) and certificates of public convenience of necessity (CPCN) under s. 196.49 of the statutes to utilities for various construction projects. Utilities must provide applications with analysis of project needs, costs, and impacts to PSC in order to receive approval to begin a project. PSC reviews applications from utilities for: (a) transmission line construction projects; (b) electric power plant construction projects; (c) municipal electric utility construction projects; (d) natural gas pipeline construction projects; and (e) electric substation construction projects.

DISCUSSION POINTS

1. PSC reports that several Wisconsin utilities have begun using newer and more complex modeling software to analyze their needs, create projects, and submit applications. The software utilities are using combines generation, transmission planning, and economic analysis into one platform. During application review, PSC staff typically run their own models based on files

submitted by an applicant to verify input assumptions and other decisions made by an applicant in their analysis. PSC reports that as utilities have begun using more sophisticated software, the state analysis to verify proposed projects is limited by comparison.

2. PSC contends that in order to effectively review and analyze applications for projects, staff needs access to software with the same capabilities as software that was used to create any given application. Assembly Bill 43/Senate Bill 70 would provide \$170,000 each year in ongoing budget authority for licensing and associated costs of advanced engineering modeling software. Software would also be used to review long-term transmission planning projects and resource shifts to renewable energy or battery systems, and to perform independent studies. Funding would be provided from the PSC's general utility regulation program revenue (PR) appropriation, which is funded from assessments on regulated utilities generally proportional to their gross revenues.

3. PSC reports that new software will be important for long-range transmission planning and monitoring resource shifts. Long-range transmission refers to transmission of electricity over long distances, using high-capacity lines typically spanning hundreds of miles or more. It is an essential component of the electric power grid, allowing electricity to be transported from areas where it is generated, including remote wind farms or hydroelectric power plants, to more populated areas. The goal of long-range transmission planning is to ensure that the transmission system can reliably and efficiently deliver electricity, while minimizing the costs and environmental impacts associated with building and operating transmission infrastructure.

4. Currently, long-range transmission analysis is performed by MISO, for the entire MISO region covering most of the central United States and parts of Canada. The analysis done by MISO does not address engineering, economics, or alternative analysis for Wisconsin individually, but rather assesses the entire region as one. PSC would use new software to identify costs and benefits of long-range transmission projects specific to Wisconsin residents.

5. In addition to using software to review applications, PSC states that software will be used to perform independent studies. As an example, PSC states updated software would improve Commission staff analysis of the accuracy of renewable resource models, allowing staff to better estimate the impacts of renewable energy and its effect on grid operation as these types of projects are increasingly pursued by utilities. In addition to renewable energy studies, PSC anticipates software may be used for creating other models for the Strategic Energy Assessment or studying electric vehicle impacts.

6. Given PSC reports that staff are unable to most effectively review project applications using currently available software, and given the other potential uses of software for analyzing renewable resource use in Wisconsin, the Committee could consider authorizing \$170,000 PR in each year of the 2023-25 biennium for new software [Alternative 1].

7. In general, PSC costs related to regulation of utilities subject to PSC jurisdiction are passed on as assessments on those utilities, which in turn pass those costs on as a component of rates paid by customers for utility service. PSC allocates general operating costs as assessments on all utilities regulated by PSC in proportion to their gross revenues. PSC operations are funded almost entirely from these general assessments, which are collected as program revenue. PSC is authorized

\$16.2 million annually under Committee action to date for utility regulation in each year of the 2023-25 biennium.

8. As a program revenue appropriation, the amounts in the schedule of appropriations for utility regulation represent a cap on authorized expenditures for that purpose. PSC assesses utilities for actual costs incurred; therefore, both revenues and expenditures may not equal the budgeted amounts. This has regularly been the case in recent biennia, and PSC has underspent its authorized amount for utility regulation by an average of \$1.4 million from 2017-18 through 2021-22, including \$1,491,900 in 2020-21 and \$1,513,000 in 2021-22.

9. PSC contends that currently budgeted utility regulation funding provides administrative flexibility necessary to maintain critical agency regulatory functions. PSC staff believe it is not appropriate to allocate currently budgeted funding for engineering modeling software. As PSC only assesses utilities for actual expenditures, increased budget authority for modeling software would not necessarily result in increased costs for utilities; rather, it could be viewed as providing additional contingencies in the event PSC's other regulatory costs reached the authorization levels that would otherwise be provided for the 2023-25 biennium. If the Committee believed current funding levels give sufficient flexibility to meet agency operational duties and still support modeling software, it could deny funding [Alternative 2].

ALTERNATIVES

1. Provide \$170,000 each year in ongoing budget authority for licensing and associated costs of advanced engineering modeling software.

ALT 1	Change to Base
PR	\$340,000

2. Take no action.

Prepared by: Margo Poelstra