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# AGRICULTURAL FAIR ASSISTANCE PROGRAM

INTERIM STAFF REPORT OF THE EFFICIENCY MAINE TRUST

Submitted to the Joint Standing Committee on Energy, Utilities and Technology  
of the Maine State Legislature

01/15/2022

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## 1. Regulatory Framework

In 2019, the Legislature enacted LD 1186, An Act To Address Electricity Costs of Agricultural Fairs, directing the Trust to administer a new program to help agricultural fairs reduce their electricity costs through the most cost-effective opportunities available. The new law established the Agricultural Fair Assistance Program (AFAP) Fund to support this program. The Public Utilities Commission assesses each electric utility an amount necessary to collect the total value of demand charges paid by the 25 agricultural fairs in the State during the prior year and transfers this amount to the AFAP Fund.<sup>1</sup>

The law also required the Maine Public Utilities Commission (PUC) to open a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals, and other similar entities. The PUC's report<sup>2</sup> on this proceeding is attached here as Appendix A.

Lastly, the law requires that the Trust submit a report on the initiative to the Energy, Utilities and Technology Committee by January 15, 2022 (and again before January 15, 2024). This report reflects the Trust's activities through December 31, 2021 and plans for the year ahead.

## 2. Background

Agricultural fairs only operate during a few days or weeks of the year. While their electricity usage can be significant during this brief timeframe, it is generally negligible for the remainder of the year. Classified as commercial and industrial electricity customers over a certain size, most agricultural fairs pay demand charges on their electric bills based on the maximum electricity demand during a given interval during the billing period. Typically, the interval used to make this determination is the 15-minute period during which the customer experiences its highest demand. Demand charges are a standard component of electricity rates used to ensure that the costs associated with transmission and distribution infrastructure are adequately paid for and, consistent with "cost-causation principles," are fairly allocated among customers. The grid must be sized to meet maximum demand conditions that will be placed on it. To fairly and efficiently allocate the costs of a customer's contribution to the demand on the system, electricity rates commonly employ demand charges.<sup>3</sup>

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<sup>1</sup> 35-A MRS §10124.

<sup>2</sup> Maine Public Utilities Commission, *Report Related to Electricity Costs of Agricultural Fairs*, presented to the Joint Standing Committee on Energy, Utilities, and Technology, December 1, 2019.

<sup>3</sup> As the PUC explains, "T&D utilities are obligated to meet consumers' demand and system-wide demand by building, operating and maintaining the infrastructure necessary to deliver electricity to all customers at all times, including when system conditions approach or reach what is known as system peak conditions (when demand on the overall system is at its highest). Because T&D system costs are largely fixed or are otherwise incurred to meet peak demands, the costs do not vary based on day-to-day electricity usage. Utilities must maintain the necessary infrastructure (e.g., transformers, conductors, and service wires) to meet system peak conditions even if at most times of the year the system is not experiencing peak conditions. For these reasons ... energy rates based on kWh usage do not provide as accurate a price signal to T&D utility customers as do demand charges. ... It is commonly recognized that demand charges recover infrastructure costs in an economically efficient manner, consistent with

As noted above, the PUC opened a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles. After examining the issue, the PUC concluded it “cannot recommend a change to T&D utility rate structures as they apply to Maine’s agricultural fairs or other limited-duration load customers as it would require a subsidy from other customers.”<sup>4</sup>

Beyond the demand charge challenge, several barriers prevent agricultural fairs from investing in energy cost-reduction measures. These include the upfront capital cost of the improvements, lack of information, and lack of technical expertise. Additionally, there is a “split incentive” at play; much of the powered equipment is owned and operated by the vendors and exhibitors, while the agricultural fairs own the property and permanent fixtures and pay the electricity bills. The vendors and exhibitors therefore do not have a strong incentive to invest in energy-efficient equipment or onsite generation, and load shifting is not a practical option for most applications.

The Trust’s AFAP is intended to help agricultural fairs identify and implement opportunities to:

- Reduce electricity costs through the most cost-effective opportunities available, including opportunities to reduce peak electricity demand;
- Enroll agricultural fairs in existing programs offered by the Trust as appropriate; and
- Offer support to Maine Association of Agricultural Fairs (MAAF) by providing other solutions to agricultural fairs to implement electric efficiency and conservation measures, including measures to reduce peak electricity demand.<sup>5</sup>

### 3. Program Reporting

#### 3.1 Program Implementation & Analysis

As a first step in designing the AFAP, the Trust set about assessing the opportunity for electricity cost-reduction measures at agricultural fairs. The Trust began by conducting a customer survey, performing site visits, and analyzing utility data. The survey sought to gather general information about fair operations, including the number and category of vendors and exhibitors, power equipment types, and energy usage by fuel type. The Trust received survey responses from 14 of the 25 fairs. The Trust staff performed site visits at four fairs, observing activity during both set-up and operation. The Trust received and analyzed utility interval data (usage and costs for periods before, during, and after operations) from six of the 26 fairs. It should be noted that some fairs are serviced through the small general service electric rate class and do not incur demand charges.

This review identified considerable electricity usage from plug loads, including amusement rides, cooking equipment, refrigeration, ice machines, vending machines, water heaters, and fans. During evening hours, lighting loads were also significant. Some fairs charge vendors a fee for electricity usage, and some require vendors (specifically those running amusement rides) to provide their own electricity

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cost-causation principles, and encourage efficient reductions in customer demand...This reasoning applies to all customers, regardless of the timing, duration, or seasonal nature of their usage.” *Id.*, at 4.

<sup>4</sup> *Id.*, at 6.

<sup>5</sup> 35-A MRS §10124(2).

using a generator. As expected, most electricity usage spiked up during the fair's active period and fell to close to zero when the fair was not active. The Trust presented this initial analysis at MAAF's Annual Conference detailing the findings from the fairs that participated in the survey.<sup>6</sup>

Through this work, the Trust identified several potential opportunities for increasing energy efficiency and distributed generation that it decided to explore further. These opportunities are:

1. Lighting – indoor and outdoor LEDs and controls;
2. Heating, cooling and ventilation
3. Compressed air – air compressors, dryers, filters, nozzles
4. Agricultural -- vacuum pumps, scroll compressors
5. On-site power generation – fossil-fired generators or solar

In June 2021, the Trust contracted with a third-party engineering firm to conduct a more comprehensive assessment of this opportunity and generate a formal report.<sup>7</sup> The consultant supplemented the Trust's initial research with additional field investigations and utility bill analysis and cost estimates of certain measures under consideration.

For basic energy efficiency measures, such as lighting, ventilation and cooling, the fairs have significant amounts of load that is inefficient. If these loads were replaced by high-efficiency alternatives, it would reduce the fairs' electricity bills by lowering their overall usage and also modestly trimming peak demand. The Trust has significant reservations as to whether these efficiency measures will meet the standard cost-effectiveness test. This is because the fairs operate for such limited periods that it seems unlikely the equipment will have sufficient run-hours to save more money in avoided electricity costs than the new equipment costs. The potential of these measures to reduce demand charges is limited.

Distributed generation (DG) solutions, such as portable generators or solar installations, also have the ability to reduce a fair's demand charges, but they face significant operational and economic challenges. Chief among the barriers are the capital, operating, and interconnection costs of various generator configurations. To rent a generator for a season costs more per kW than the demand charge that the fairs pay per kW. To purchase a sizeable generator, such as a 200kW "genset," would cost tens of thousands of dollars just for the generator. Permitting and installation would add further costs, as would annual operation and maintenance. Significantly, any DG solution "behind the meter" that provides less than 100% of the fair's load requirements will, by definition, require the generator to operate in parallel with the grid. In other words, the generator and the grid need to operate simultaneously, in concert, to safely supply the fair's load. While this is technically feasible, it can also be expensive to set up. In the Trust's experience of analyzing and developing on-site generator systems, the customer's interconnection costs for such systems can range from \$10,000 up to \$100,000 per site. It is not uncommon for the customer's interconnection costs to significantly exceed the costs of the generator.

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<sup>6</sup> See presentation attached as Appendix B.

<sup>7</sup> Dirigo Architectural Engineering, LLC., *Maine Agricultural Fairs Electrical Energy Cost Reduction Study*, 2021.

While the revenues generated from this program could be enough to fund such an arrangement for several fairs, they will not be sufficient to fund substantial DG solutions at all of the state's 25 fairs. Seeking a more equitable solution, the Trust also analyzed the possibility of procuring a single, large (1 Megawatt) generator and a flatbed trailer that could travel from fair to fair, hooking up behind the meter to mitigate demand from the grid. The approximate cost of such a generator was estimated at \$350,000 and the trailer is another \$50,000. Unfortunately, since each fairground would need to make extensive upgrades to its electrical service to interconnect a genset to run in parallel with the grid, the Trust's consultant estimated total interconnection costs (across 25 fairgrounds) of an additional \$625,000. Operating and maintenance would add \$80,000-\$90,000 in costs each year. It is not clear if this "circuit rider" genset would be logistically feasible nor if the revenues of the program would be sufficient to subsidize the fairs investing in the balance of costs for the project.

### 3.2 Financial

The financial revenues and spending for this initiative have been heavily impacted by COVID. The closure of all fairs during the first year of this initiative made it challenging for the Trust to study the baseline (typical) operations of the fairs. As the closures extended for some fairs into the second year of the pandemic, it was very difficult to analyze opportunities for lowering electricity costs, and also depressed revenues (based on the amount of demand charges paid by the fairs) that could be available to fund incentives through the program. Nonetheless, since the inception of this program, the revenues have continued to be remitted to the Trust, reaching a balance to date of \$385,758. Because the analytical field work was significantly delayed, the Trust is only now launching financial incentives targeted to the fairs (discussed in the next section). The Trust's only expenditures from the fund to date (\$7,680) have been deployed for third-party engineering and economic analysis on customized solutions for the fairs. The Trust's staff time on the initiative has thus far been paid out of the Commercial & Industrial Prescriptive Program, which is the main source of funding for electric efficiency incentives on high-efficiency lighting, HVAC, compressed air and refrigeration at agricultural facilities.

## 4. Next Steps

To date, all activity of the program has focused on research and analysis and establishing communications between the Trust and the fairs. On this front, good progress has been made. With the basic analytical work completed, the Trust now turns to launching in 2022 a suite of new incentives that will be offered exclusively to agricultural fairs. The objective of these new incentives is to achieve significant energy efficiency upgrades of the lighting, HVAC and agricultural equipment at all fairs before the start of the 2022 fair season.

As noted above, it is unlikely that most traditional electrical efficiency measures at the fairs will meet the standard cost-effectiveness test. Nonetheless, the statute expressly authorized the Trust to pursue measures at agricultural fairs that are the "most cost-effective opportunities available." The Trust interprets this to mean it may fund measures that do not achieve a benefit-to-cost ratio of 1.0 or greater.



The Trust will issue a Funding Opportunity Notice (FON) offering promotional (i.e., elevated) incentives for the measures that its research has found to offer the greatest opportunity for efficiency upgrades on the fairgrounds. As noted above, this will include, but not be limited to, interior and exterior lighting and controls, HVAC systems, and various types of agricultural equipment and compressor measures.

Following the Trust's successful model of offering FON's targeted at particular customer segments (e.g., hospitality, schools, municipal buildings, outdoor lighting) over the past several years, the program will direct marketing and outreach about the FON directly to the fairs and the electrical contractor community. Given the existing relationship that the program has built with the fairs and the MAAF to date, the Trust is confident the program will produce significant activity in calendar year 2022.

After the measures have had an opportunity to operate, the Trust will review the actual hours of use and the fairs' utility bills to determine the impact of the measures and estimate the cost-effectiveness of the measures. The Trust will share the results with the MAAF and individual fairs and will include a full accounting in the Trust's subsequent Annual Reports. A second report-back to the Legislature is due in January 2024.



STATE OF MAINE  
PUBLIC UTILITIES COMMISSION

Philip L. Bartlett, II  
CHAIRMAN

R. Bruce Williamson  
Randall D. Davis  
COMMISSIONERS

Harry Lanphear  
ADMINISTRATIVE DIRECTOR

November 25, 2019

Honorable Mark W. Lawrence, Senate Chair  
Honorable Seth A. Berry, House Chair  
Energy, Utilities and Technology Committee  
100 State House Station  
Augusta, Maine 04333

**Re: Report Related to Electricity Costs of Agricultural Fairs**

Dear Senator Lawrence and Representative Berry:

During the 2019 legislative session, An Act to Address Electricity Costs of Agricultural Fairs (Act) was enacted.<sup>1</sup> The Act, in part, directed the Commission to open a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals, and other similar entities. The Commission was also directed to submit a report on these issues to the Committee by December 1, 2019. Attached is the Commission's Report for the Committee's consideration.

If you have any questions, please do not hesitate to contact us.

Sincerely,

Philip L. Bartlett II, Chairman

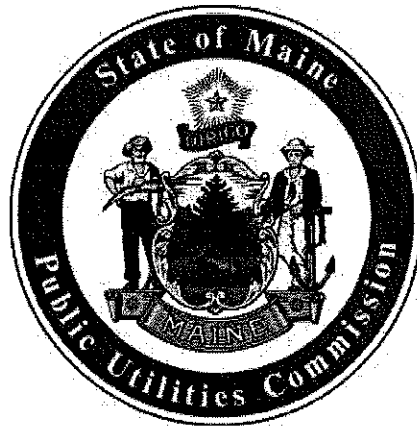
On behalf of the Chairman  
R. Bruce Williamson, Commissioner  
Randall D. Davis, Commissioner  
Maine Public Utilities Commission

cc: Energy, Utilities and Technology Committee Members  
Lucia Nixon, Legislative Analyst

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<sup>1</sup>P.L. 2019, c. 169.

# **MAINE PUBLIC UTILITIES COMMISSION**



## **REPORT RELATED TO ELECTRICITY COSTS OF AGRICULTURAL FAIRS**

**Presented to the  
Joint Standing Committee on  
Energy, Utilities and Technology  
December 1, 2019**

## I. INTRODUCTION

During its 2019 session, the Legislature enacted An Act To Address Electricity Costs of Agricultural Fairs. P.L. 2019, c. 169 (emergency, effective May 30, 2019) (Act). Section 1 of the Act (codified at 35-A M.R.S. § 10124) directs the Efficiency Maine Trust (Trust) to establish and administer an agricultural fair assistance program to help agricultural fairs reduce electricity costs through the most cost-effective opportunities available. The program is to be funded through a Commission assessment on transmission and distribution (T&D) utilities each year. The amount of the assessment will be equal to the total amount of demand charges paid by agricultural fairs to the T&D utilities during the prior year.<sup>1</sup> The utilities' cost of the assessment is recoverable in rates, so all T&D customers will be required to fund the program. See P.L. 2019, c. 169, § 3.

The term "agricultural fair" is defined in the Act as having the same meaning as in 7 M.R.S. § 81(1). That statute states:

"Agricultural fair" or "fair" means an exhibition that is designed to promote education and encourage improvement in agriculture and that includes, but is not limited to, the following:

- A. The awarding of premiums for livestock competitions;
- B. The display of and awarding of premiums for horticultural products;  
and
- C. The display and presentation of agricultural activities and projects undertaken by youth organizations.

7 M.R.S. § 81(1). The Department of Agriculture, Conservation and Forestry has a list of agricultural fairs on its website.<sup>2</sup>

Section 2 of the Act directs the Commission to open a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals, and other similar entities. In this proceeding, the Commission is directed to examine options for alternative rate design, with particular attention to electricity demand charges, and to identify electricity customers other than agricultural fairs that may benefit from a Trust program similar to that established in the Act. The Act requires the Commission to submit a report on these issues to the Energy, Utilities and Technology Committee no later than December 1, 2019.

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<sup>1</sup> The Act is provided as Attachment A to this Report.

<sup>2</sup> The list is provided as Attachment B to this Report.

## II. COMMISSION INQUIRY

On June 17, 2019, the Commission initiated an Inquiry to gather information to conduct the required examination.<sup>3</sup> Through the Inquiry, the Commission requested comments from interested persons on, among other things, rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals and other similar entities.<sup>4</sup> The Commission received comments during the Inquiry from Maine's T&D utilities, the Trust, and Dot Kelly.<sup>5</sup>

### A. Rate Design and Related Issues

In the Notice of Inquiry (NOI),<sup>6</sup> the Commission requested comments on the following rate design and related issues:

1. Discuss the relationship between the cost of providing T&D service to customers that have seasonal, limited-duration, concentrated load profiles—including but not limited to agricultural fairs, seasonal festivals, and other similar entities—and the use of demand charges to recover such costs.
2. Discuss options for alternatives to demand charges that may be appropriate for these types of customers.
3. In addition to agricultural fairs, identify and discuss other types of electricity customers that may benefit from a Trust program similar to that established under Section 1 of the Act. Is the intent of the Act to focus this examination on “seasonal, limited-duration, concentrated load profile” customers? Please explain the response.

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<sup>3</sup> *Public Utilities Commission, Inquiry into Agricultural Fair Assistance Program and Rate Design*, Docket No. 2019-00136, Notice of Inquiry (June 17, 2019).

<sup>4</sup> The Commission also requested comments on issues related to an agricultural fair assistance program to be administered by the Trust and the amount of funds received by T&D utilities from agricultural fairs through demand charges during 2018. Based on the demand-charge revenue information provided by the T&D utilities, the Commission directed that a total amount of \$179,000 (\$161,000 from Central Maine Power Company and \$18,000 from Emera Maine) be transferred to the Trust to fund the agricultural fair assistance program. The other T&D utilities did not collect any funds from agricultural fairs through demand charges.

<sup>5</sup> Commission Staff contacted the Maine Association of Agricultural Fairs on several occasions to inform the Association of the opportunity to present comments in the Inquiry. The Association did not submit comments on the issues raised in the Act.

<sup>6</sup> The NOI is provided as Attachment C to this Report.

### III. DISCUSSION

#### A. Utility Rate Components

Demand charges are a common component of electric rate structures for T&D utilities in Maine and across the country. Generally, utility rates have three main components: (1) energy usage or so-called volumetric charges, which are assessed on the basis of kilowatt-hours (kWh) consumed; (2) demand charges, which are assessed based on the customer's peak usage during a billing period, measured in kilowatts (kW); and (3) monthly fixed customer charges, which reflect costs of services that do not vary with energy usage or peak hour usage, such as metering and billing. In addition to fixed monthly charges, residential and small-commercial customers pay for T&D service on the basis on kWh charges, and larger commercial or industrial customers pay on the basis of kW charges.

#### B. Demand Charges

T&D utilities are obligated to meet consumers' demand and system-wide demand by building, operating and maintaining the infrastructure necessary to deliver electricity to all customers at all times, including when system conditions approach or reach what is known as system peak conditions (when demand on the overall system is at its highest). Because T&D system costs are largely fixed or are otherwise incurred to meet peak demands, the costs do not vary based on day-to-day electricity usage. Utilities must maintain the necessary infrastructure (e.g., transformers, conductors, and service wires) to meet system peak conditions even if at most times of the year the system is not experiencing peak conditions.

For these reasons, as a general matter, energy rates based on kWh usage do not provide as accurate a price signal to T&D utility customers as do demand charges. Under a volumetric kWh rate, the customer could save significantly on electric delivery costs while not necessarily reducing demand on the infrastructure needed to provide service, thus not reducing costs. It is commonly recognized that demand charges recover infrastructure costs in an economically efficient manner, consistent with cost-causation principles, and encourage efficient reductions in customer demand, which is the driver of a significant portion of delivery-system costs. This reasoning applies to all customers, regardless of the timing, duration, or seasonal nature of their usage.

#### C. Limited-Duration Loads

Limited-duration load customers, such as agricultural fairs, are entities that use all or most of their electricity at certain times of the year, such as a few days or hours. Other examples of limited duration load customers include: seasonal festivals and events; concerts; and outdoor recreational facilities, such as lighting for ball fields. Seasonal operations, such as ski facilities and amusement parks, might also be considered limited-duration load customers; however, these customers operate for several months as opposed to a few days or hours.

In considering rate designs for customers with concentrated loads of limited duration, it is important to recognize, as discussed above, that distribution-system costs are driven largely by customers' peak demand, not by energy or volumetric use, and demand charges (which reflect that peak usage demand) are an accepted and appropriate component of T&D utility rate design.

#### D. Alternative Rate Structures

Alternative rate structures could be applied to agricultural fairs and other limited-duration customers to reduce their electricity costs. However, the Commission emphasizes that any rate structure changes (such as the elimination of demand charges) that reduce these customers' overall payments to the T&D utility will ultimately be paid for by other utility customers.

For example, utilities can create a separate rate class for limited-duration loads that does not include a demand charge. To accomplish revenue neutrality and avoid rate increases to other customers, however, this rate class would need to include a significantly higher fixed customer charge. Without a demand charge or a significantly higher fixed charge, other customers would end up paying higher rates.

T&D utilities also have the authority to enter into special rate contracts with individual customers, under certain circumstances.<sup>7</sup> Special rate contracts can be tailored to the unique circumstances of each customer and can be established without demand charges. All special rate contracts require Commission review and approval.

### **IV. EFFICIENCY MAINE TRUST PROGRAM**

As stated above, the Act specifies that, as part of its required examination, the Commission identify electricity customers other than agricultural fairs that may benefit from a Trust program similar to the agricultural fair assistance program established in the Act. Electricity customers that use all or most of their electricity within limited time periods in the year, such as seasonal festivals and events; concerts; and outdoor recreational facilities, such as lighting for ball fields, ski facilities and amusement parks, may benefit from a Trust program similar to the agricultural fair assistance program.

As a general matter, the Trust's programs should be available to similarly situated customers. Customers with limited load duration should be able to benefit through reduced electricity costs from a program similar to the agricultural fair assistance program. This assumes that the Trust develops an agricultural fair assistance program that is cost-effective.

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<sup>7</sup> See 35-A M.R.S. § 703(3-A); see also *Central Maine Power Company, Request for Approval of Special Rate Contract with Newpage Corporation (Formerly Mead Oxford Corp.)*, Docket No. 2005-451, Order (Part II) at 3 (Feb. 17, 2006) (establishing three-part test for approval of special rate contracts with T&D utilities).

Rather than specifically identifying customers who would be eligible for such a program, eligibility should be defined through the load characteristics of customers. For example, eligibility could be defined as customers that use all or a specified percentage of usage (e.g., 90% of annual usage) within a defined period. The period could be a three-day period, a week, a month, or some other period.

## **V. CONCLUSION**

As discussed above, demand charges are a common and appropriate component of a T&D utility's rate design, and removing those charges for a subset of customers will increase costs for all other customers. As such, the Commission cannot recommend a change to T&D utility rate structures as they apply to Maine's agricultural fairs or other limited-duration load customers as it would require a subsidy from other customers.

The Commission's expertise is in utility rate setting and rate design, not efficiency-program design. Thus, if any expanded version of this program is contemplated, the Commission recommends it be developed by the Trust.



## STATE OF MAINE

IN THE YEAR OF OUR LORD

TWO THOUSAND NINETEEN

H.P. 860 - L.D. 1186

**An Act To Address Electricity Costs of Agricultural Fairs**

**Emergency preamble.** Whereas, acts and resolves of the Legislature do not become effective until 90 days after adjournment unless enacted as emergencies; and

**Whereas,** this legislation needs to take effect before the expiration of the 90-day period in order to be in effect for the 2019 agricultural fair season; and

**Whereas,** in the judgment of the Legislature, these facts create an emergency within the meaning of the Constitution of Maine and require the following legislation as immediately necessary for the preservation of the public peace, health and safety; now, therefore,

**Be it enacted by the People of the State of Maine as follows:**

**Sec. 1.** 35-A MRSA §10124 is enacted to read:

**§10124. Agricultural fair assistance program**

**1. Definitions.** As used in this section, unless the context otherwise indicates, the following terms have the following meanings.

**A.** "Agricultural fair" has the same meaning as in Title 7, section 81, subsection 1.

**B.** "Demand charge" means a charge on an electric bill that is based on the customer's peak demand for electricity.

**C.** "Fund" means the agricultural fair assistance program fund established under subsection 3.

**D.** "Program" means the agricultural fair assistance program established under subsection 2.

**2. Program established.** The trust shall establish and administer an agricultural fair assistance program to help agricultural fairs reduce electricity costs through the most cost-effective opportunities available. Under the program, the trust shall:

A. Conduct outreach and provide technical assistance to agricultural fairs to:

(1) Identify opportunities to reduce electricity costs, including but not limited to opportunities to reduce peak electricity demand; and

(2) Enroll agricultural fairs in existing programs offered by the trust as appropriate; and

B. Offer custom financial incentives to agricultural fairs to implement electric efficiency and conservation measures, including but not limited to measures to reduce peak electricity demand.

The program may use a definition of cost-effective other than the definition adopted by the trust pursuant to section 10110, subsection 2.

3. Fund established. The trust shall establish the agricultural fair assistance program fund as a nonlapsing fund administered by the trust to fund the program. The commission shall assess each transmission and distribution utility an amount necessary to collect the total amount of demand charges paid by agricultural fairs in the State to transmission and distribution utilities during the prior year. All amounts collected under this subsection must be transferred to the fund. Any interest earned on funds in the fund must be credited to the fund. Funds not spent in any fiscal year remain in the fund to be used by the program. The assessments charged to transmission and distribution utilities under this subsection are just and reasonable costs for rate-making purposes. The commission may issue any appropriate orders to transmission and distribution utilities necessary to achieve the goals of this subsection.

4. Report. No later than January 15, 2022 and January 15, 2024, the trust shall submit a report on the program to the joint standing committee of the Legislature having jurisdiction over energy and utility matters. The report must include information on program implementation, total deposits into and expenditures from the fund, program activity and reductions in peak electricity demand, energy consumption and electricity costs achieved. After receiving the report due by January 15, 2024, the committee may report out a bill relating to the program to the Second Regular Session of the 131st Legislature.

5. Repeal; remaining funds. This section is repealed June 30, 2024. In the event funds in the fund are not expended or contracted for expenditure as of June 30, 2024, the commission shall ensure that the value of those funds is returned to electricity consumers.

**Sec. 2. Rate design; proceeding; report.** The Public Utilities Commission shall open a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals and other similar entities. In this proceeding, the commission shall examine options for alternative rate design, with particular attention to electricity demand charges, and identify other types of electricity customers, in addition to agricultural fairs, that may benefit from a program similar to that established under the Maine Revised Statutes, Title 35-A, section 10124. No later than December 1, 2019, the commission shall submit a report on its findings and recommendations under this section to the Joint Standing Committee on Energy, Utilities and Technology. The committee

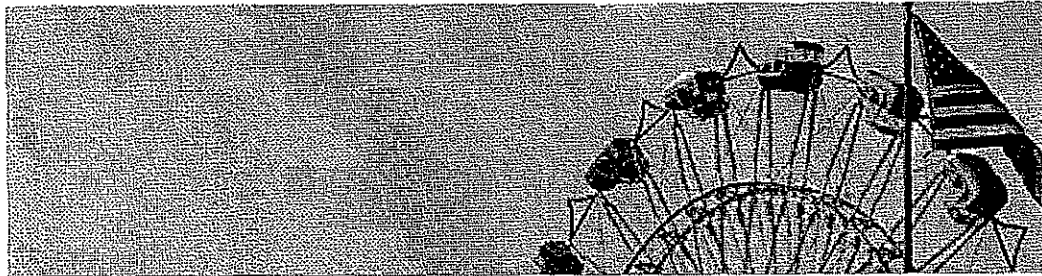
may report out a bill to the Second Regular Session of the 129th Legislature based on the report.

**Emergency clause.** In view of the emergency cited in the preamble, this legislation takes effect when approved.

Department of Agriculture, Conservation and Forestry

DACF Home → Bureaus & Programs → Bureau of Agriculture → Agricultural Resource Development Division → Agricultural Fair Program

Agricultural Resource Development Division



Receive State Fair News!

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# Agricultural Fair Program

Maine has some of the best agricultural fairs in New England! If you want to know more about Maine's great agricultural fairs, go to the Maine Association of Agricultural Fairs website for the latest news and information or directly to the fairs listed below.

## Upcoming 2019 Agricultural State Fair Dates

Dates	Fair	Town
June 13, 2019 - June 16, 2019	Monmouth Fair	Monmouth, Maine
June 28, 2019 - July 3, 2019	Northern Maine Fair	Presque Isle, Maine
July 4, 2019 - July 7, 2019	Houlton Fair	Houlton, Maine
July 11, 2019 - July 14, 2019	Ossipee Valley Fair	South Hiram, Maine
July 19, 2019 - July 21, 2019	Waterford World's Fair	North Waterford, Maine
July 25, 2019 - July 28, 2019	Pittston Fair	Pittston, Maine
July 25, 2019 - August 3, 2019	Bangor State Fair	Bangor, Maine
August 6, 2019 - August 11, 2019	Topsham Fair	Topsham, Maine
August 8, 2019 - August 17, 2019	Skowhegan State Fair	Skowhegan, Maine
August 17, 2019 - August 24, 2019	Union Fair	Union, Maine
August 21, 2019 - August 22, 2019	Maine Farm Days	Clinton, Maine
August 22, 2019 - August 25, 2019	Acton Fair	Acton, Maine
August 22, 2019 - August 25, 2019	Piscataquis Valley Fair	Dover-Foxcroft, Maine

## ATTACHMENT A TO NOTICE OF INQUIRY

MAINE PUC DOCKET NO. 2019-00136

<b>Dates</b>	<b>Fair</b>	<b>Town</b>
August 25, 2019 - September 2, 2019	Windsor Fair	Windsor, Maine
August 29, 2019 - September 2, 2019	Blue Hill Fair	Blue Hill, Maine
August 30, 2019 - September 2, 2019	Harmony Fair	Harmony, Maine
August 31, 2019	Springfield Fair	Springfield, Maine
September 5, 2019 - September 8, 2019	Clinton Lions Agricultural Fair	Clinton, Maine
September 6, 2019 - September 8, 2019	Litchfield Fair	Litchfield, Maine
September 11, 2019 - September 14, 2019	Oxford County Fair	Oxford, Maine
September 13, 2019 - September 15, 2019	New Portland Lion's Fair	New Portland, Maine
September 15, 2019 - September 21, 2019	Farmington Fair	Farmington, Maine
September 20, 2019 - September 22, 2019	Common Ground Fair	Unity, Maine
September 22, 2019 - September 28, 2019	Cumberland Fair	Cumberland Ctr, Maine
September 29, 2019 - October 6, 2019	Fryeburg Fair	Fryeburg, Maine

**Credits**

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**Attachment C**

STATE OF MAINE  
PUBLIC UTILITIES COMMISSION

Docket No. 2019-00136

June 17, 2019

PUBLIC UTILITIES COMMISSION  
Inquiry into Agricultural Fair Assistance  
Program and Rate Design

NOTICE OF INQUIRY

BARTLETT, Chairman; WILLIAMSON and DAVIS, Commissioners

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**I. SUMMARY**

Through this Notice, the Commission initiates an Inquiry to examine (1) rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals and other similar entities and (2) issues related to an agricultural fair assistance program to be administered and funded through the Efficiency Maine Trust. This Inquiry is initiated in response to recently enacted legislation.

**II. BACKGROUND**

During its 2019 session, the Legislature enacted An Act To Address Electricity Costs of Agricultural Fairs. P.L. 2019, ch. 169 (emergency, effective May 30, 2019) (Act). Section 1 of the Act (codified at 35-A M.R.S. § 10124) directs the Efficiency Maine Trust (EMT) to establish and administer an agricultural fair assistance program to help agricultural fairs reduce electricity costs through the most cost-effective opportunities available. The program is to be funded through a Commission assessment on transmission and distribution (T&D) utilities each year in an amount equaling the total amount of demand charges paid by agricultural fairs to T&D utilities during the prior year.

The term "agricultural fair" is defined in the Act as having the same meaning as in 7 M.R.S. § 81(1). That statute states:

"Agricultural fair" or "fair" means an exhibition that is designed to promote education and encourage improvement in agriculture and that includes, but is not limited to, the following:

- A. The awarding of premiums for livestock competitions;
- B. The display of and awarding of premiums for horticultural products; and

C: The display and presentation of agricultural activities and projects undertaken by youth organizations.

7 M.R.S. § 81(1). The Department of Agriculture, Conservation and Forestry has a list of agricultural fairs on its website. That list is provided as Attachment A to this Notice.

Section 2 of the Act directs the Commission to open a proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles, including but not limited to agricultural fairs, seasonal festivals, and other similar entities. In this proceeding, the Commission is directed to examine options for alternative rate design, with particular attention to electricity demand charges, and to identify electricity customers other than agricultural fairs that may benefit from an EMT program similar to that established in the Act. The Commission is required to submit a report on these issues to the Energy, Utilities and Technology Committee no later than December 1, 2019. This Inquiry will be the Commission's vehicle for the examination required by the Act.

### III. REQUEST FOR INFORMATION AND COMMENTS

To aid this Inquiry, the Commission seeks information and comments on the following issues. Comments may be filed in the Commission's electronic case management system, described in section IV below, no later than **Friday, July 5, 2019**.

#### Agricultural Fair Assistance Program

1. Should the Agricultural Fair Assistance Program (AFAP) be incorporated into the EMT Triennial Plan and, if so, what process would this require?
2. How should the requirement "to help agricultural fairs reduce electricity costs through *the most cost-effective* opportunities available" (emphasis added) be evaluated and determined?
3. Under 35-A M.R.S. § 10124(2)(B), the program may use a definition of cost effective other than that adopted under 35-A M.R.S. § 10110(2). Given this, how should cost effective be defined? What should the roles of (1) the EMT Board and (2) the Commission be in review and approval of the definition?
4. Does the list of agricultural fairs in Attachment A include all entities that would be eligible for assistance through the AFAP? If not, what other entities or groups of entities should be eligible?

5. How should third parties that may be involved in agricultural fairs—such as entities that own/operate the rides, games, or other amusements; entities that prepare and provide food; and others—be considered under the AFAP?

6. If an agricultural fair takes service from a T&D utility in a rate class that does not include a demand charge, or a rate class that would recover most of the fair's bill through customer or kWh charges, should it be eligible for assistance through the AFAP? Please provide the rationale for the response to this question.

#### Assessment

7. For purposes of the required assessment, should the demand charge costs of the attached list of agricultural fairs be the amount of the assessment?

8. All T&D utilities are asked to (a) identify the applicable rate class for each agricultural fair in their service territory, (b) describe how they bill agricultural fairs, including typical metering configurations and accounts (e.g., whether the loads of the rides and the loads of the animal barns metered separately), and (c) indicate the total amount they collect through demand charges from agricultural fairs (including those listed in Attachment A) in calendar year 2018. If a T&D utility does not have this data readily available, the utility should provide information on how it can identify these amounts.

9. T&D utilities are also asked to identify any agricultural fairs that take service in a rate class that either (a) does not include demand charges or (b) recovers most of a customer's bill through customer or kWh charges.

#### Rate Design and Related Issues

10. Discuss the relationship between the cost of providing T&D service to customers that have seasonal, limited-duration, concentrated load profiles—including but not limited to agricultural fairs, seasonal festivals, and other similar entities—and the use of demand charges to recover such costs.

11. Discuss options for alternatives to demand charges that may be appropriate for these types of customers.

12. In addition to agricultural fairs, identify and discuss other types of electricity customers that may benefit from an EMT program similar to that established under Section 1 of the Act. Is the intent of the Act to focus this examination on "seasonal, limited-duration, concentrated load profile" customers? Please explain the response.



#### IV. INTERESTED PERSONS

This Notice will be provided to all T&D utilities; the EMT; the Office of the Public Advocate; the Commissioner of the Department of Agriculture, Conservation and Forestry; the Maine Association of Agricultural Fairs; and the notification list in Docket No. 2018-00321 (EMT Fourth Triennial Plan proceeding).

Any interested person that would like to submit comments in this proceeding or receive notification of submittals must sign up as a "registered user" in the Commission's Case Management System (CMS).<sup>1</sup> When registering, persons should indicate the entity or entities they represent and on whose behalf filings will be made. Such persons should also place themselves on the notification list for the above referenced docket.

Dated at Hallowell, Maine, this 17th day of June, 2019.

BY ORDER OF THE COMMISSION

/s/ Harry Lanphear  
Administrative Director

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<sup>1</sup> To register, go to the Commission's website at [www.maine.gov/mpuc](http://www.maine.gov/mpuc) and click "Online Filing, Docketed Case, Forms, and RFPs" on the left-hand side of the home page. Then click the large "Registered Users" link. Then click the "New User Registration" link at the bottom of the "Account Login" area. Detailed instructions are available on the Commission's website at [www.maine.gov/tools/whatsnew/index.php?topic=pucpressreleases&id=414946&v=article08](http://www.maine.gov/tools/whatsnew/index.php?topic=pucpressreleases&id=414946&v=article08).



# Agricultural Fair Assistance Program

Rick Meinking  
Senior Program Manager  
January 25, 2020

# Mission of Efficiency Maine Trust (EMT)

To lower the cost and environmental impacts of energy in Maine by promoting energy efficiency and other distributed energy resources

# Efficiency Maine Trust (EMT)

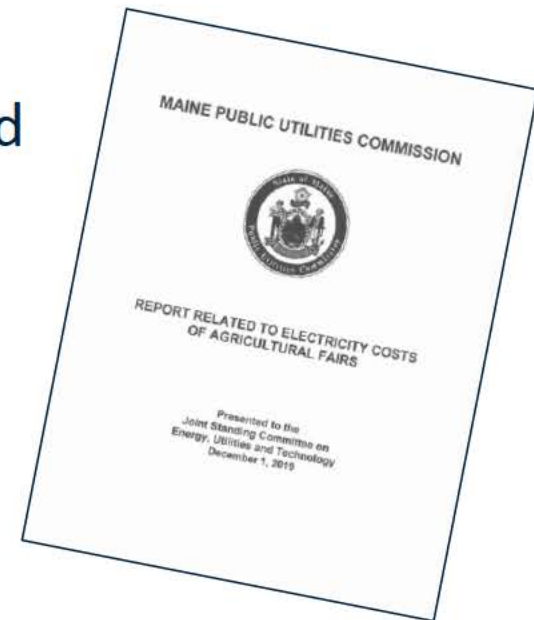
- Runs programs to promote energy conservation for all customer groups, all energy types, in all areas of Maine
- Provides rebates, financing, technical information and registry of vendors
- Funded by
  - Electric and natural gas utility ratepayers
  - Regional Greenhouse Gas Initiative (RGGI)
  - ISO New England grid operator (Forward Capacity Market)
  - Grants and contracts

# Agricultural Fair Assistance Program

- Established by LD 1186
- Calls for Efficiency Maine to help agricultural fairs reduce electricity costs through cost-effective opportunities and financial incentives
- Requires Maine Public Utilities Commission to consider alternative rate designs

# Rate Design: Public Utilities Commission

- Opened proceeding to examine rate design and related issues for electricity customers that have seasonal, limited-duration, concentrated load profiles
- Submitted a report on PUC findings and recommendations to Joint Standing Committee on Energy, Utilities and Technology.



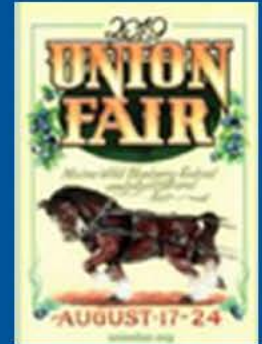
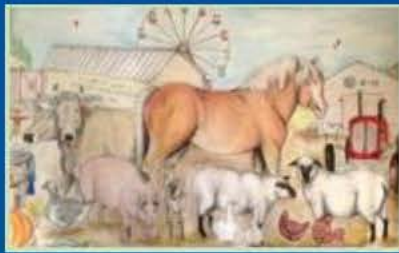
# Reports

- No later than January 15, 2022 and 2024
- Include information on:
  - Program implementation,
  - Fund deposits and expenditures,
  - Program activity,
  - Reductions in peak electricity demand,
  - Energy consumption, and
  - Electricity costs achieved.

# Workplan

- Kick-off meeting
- Conduct fair survey and analyze results
- Visit fairs during setup and operation
- Obtain and analyze baseline utility data (consumption and cost)
- Draft findings/recommendations to stakeholders





# Survey Results

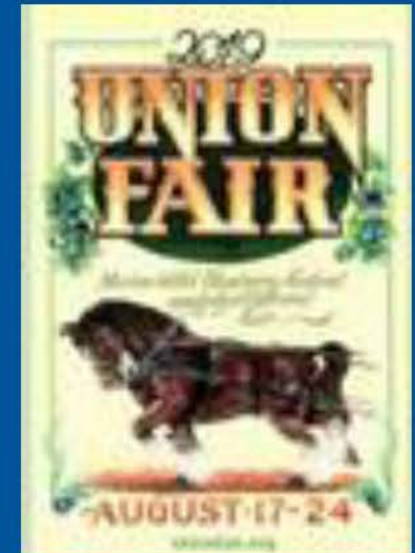
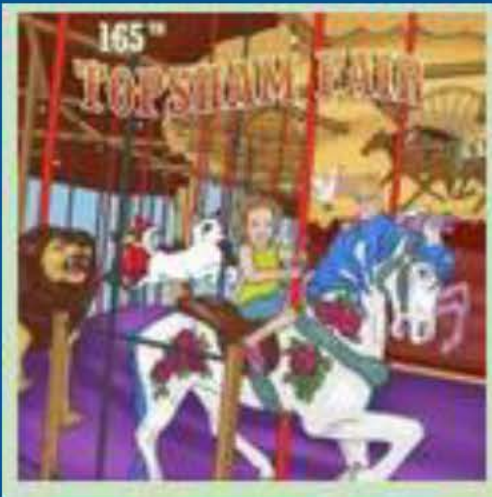


# By the Numbers (Averages)

**(N=14)**

- Paid Admissions: 2,024 – 55,000
- Average Revenue/Admission – \$23.49 **(13)**  
*\$14.40 - \$36.85*
- Average Expense/Admission – \$21.46 **(13)**  
*\$9.56 - \$36.80*
- Vendor Fee – Flat fee: \$400 **(14)** (*\$50 - \$800*)  
By foot: \$30/foot (*\$15 - \$45*)
- Additional Charge for Electricity – \$25.00 **(2)**  
Five different rates **(1)**
- Midway Electricity – Vendor provides **(7)**  
Fair provides **(2)**

# Electric Bill Analysis



# Main Electricity Billing Categories

- Energy consumption
  - Amount of energy (kWh) consumed, multiplied by the relevant price of energy (\$/kWh) during the billing period.
- Demand
  - Maximum amount of power (kW) drawn for any given time interval (typically 15 minutes) during the billing period, multiplied by the relevant demand charge (\$/kW)

# Electric Bills

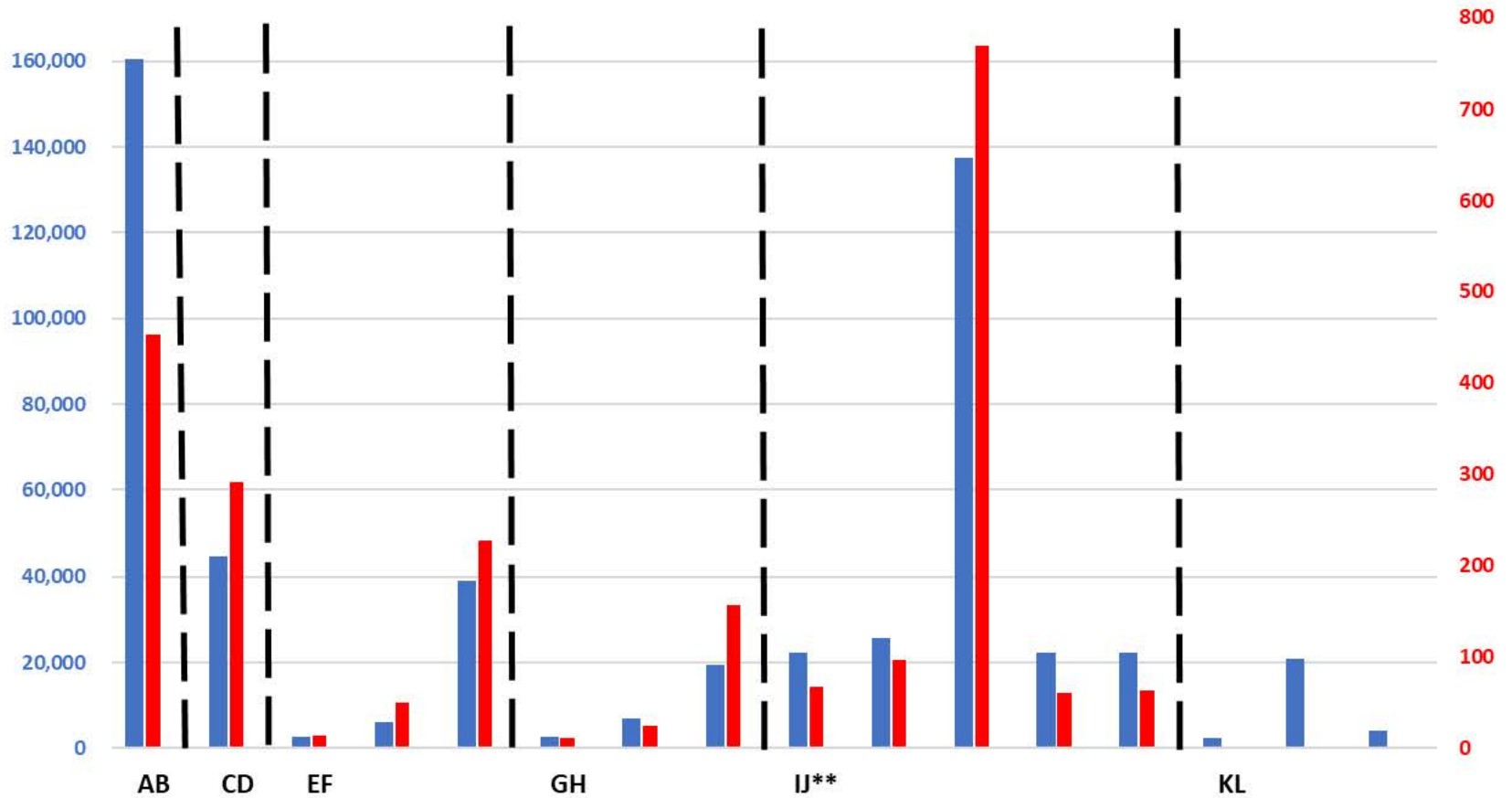
**(N=5)**

- Transmission and Distribution (T&D) Charges
  - Average kWh rate – \$0.0022 **(4)**
  - Average kW rate – \$12.79 **(5)**

*Range - \$6.39 - \$21.04*
- Standard offer average – \$0.072 **(3)**
- Outside lights – up to \$157.27/month **(1)**



## kWh & kW by Fair



# Plug Load is Huge







# PUC Rate Design Report

- PUC briefed Legislature January 14,2020:

*Commission cannot recommend a change to T&D utility rate structures as they apply to Maine's ag fairs or other limited-duration load customers as it would require a subsidy from other customers.*

# Next Steps

- Obtain utility data
- Assess budget for energy measures
- Determine cost-effective standard
- Explore opportunities
  - On-site generation
  - Solar opportunity(s)
  - Lighting
  - Refrigeration
  - Heating/Cooling

# Available Efficiency Maine Prescriptive Incentives

- Lighting (indoor and outdoor fixtures and screw-in LEDs)
- Heating, cooling and ventilation
  - Boilers, furnaces, and ductless heat pumps
  - Ventilation controls
- Compressed air (e.g., air compressors, dryers, filters, nozzles)
- Agricultural (e.g., vacuum pumps, scroll compressors)



# OPEN MIC – Questions

