Efficiency Maine Trust: RFI

Successful Implementation of a Statewide Electrification Program

Prepared for:

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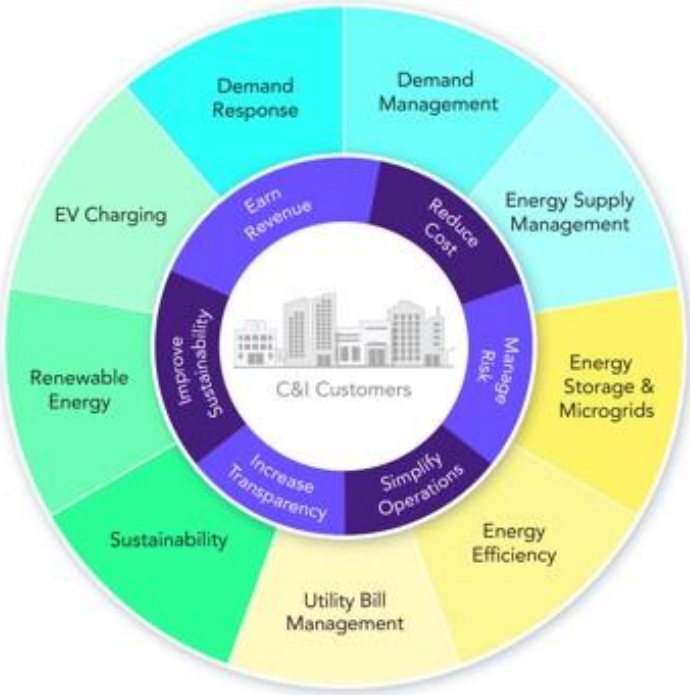
Enel X

Company History

Enel X is a subsidiary of the Enel Group, the largest utility in the world by market capitalization and also the “greenest” with over half of its generation assets under a renewable category and a pledge of company-wide carbon neutrality by 2050. Enel is a leader in green power production around the world including over 200 large-scale wind, solar, geothermal, hydro, and battery storage projects in the US. In 2017, Fortune magazine placed Enel in 20th position at the annual ranking ‘Change the World’.

As part of the Enel Group, Enel X helps enterprises develop, execute, and refine customized energy management strategies to reduce costs, manage risk, and maximize the value of emerging energy technologies. Enel X is the world leader in demand-side flexibility solutions, providing more demand response and demand management programs worldwide than any other provider. In addition to its flexibility solutions, Enel X’s technology-enabled advisory solutions help large energy users create value through strategic energy procurement, energy management, and utility bill management software and services.

Enel X is the only provider that can offer a comprehensive energy solution. See below for our full range of services.



Demand Response – access to market opportunities to monetize flexibility (capacity, energy, and ancillary services)

Demand Management – tools to mitigate system and facility-level demand charges

Energy Supply Management – retail energy products and procurement advisory services (transactional and strategic)

Energy Storage & Microgrids – thermal and battery energy storage solutions

Energy Efficiency – building audit or commissioning, on-going performance monitoring and analytics, project implementation

EV Charging – smart charging for electric vehicles

Utility Bill Management – bill collection, bill verification, payment, budgeting, reporting

Sustainability – program development, implementation, reporting

Renewable Energy - program development and execution of on-site renewable generation or off-site renewable procurement

How to Enhance the Electrification Process, and Reap the Benefits of a Successful Deployment

The electrification process does not necessarily refer to a single policy realm but encompasses a few of them by engendering technological changes and triggering new consumer behavior. As for this, a multi-level strategy needs to be adopted. The multi-level word refers, therefore, to both the plurality of policy fields affected (e-Mobility, energy efficiency, etc.) and the different rationales behind the recommendations outlined here, which comprise the needs to elaborate strategic plans, diversify existing financing tools and enhance the awareness of both Italian citizens and stakeholders about the benefits and opportunities that the electrification process is opening.

Fostering the electrification process requires action across different sectors and fields making a multi-level strategy necessary to reap all the benefits and opportunities that can be activated for Maine and its industrial value chains.

Five Focus Areas of a Successful Electrification Program Deployment

e-Mobility Take Up

- Adopting an effective management of the e-Mobility transition by setting up a comprehensive strategic vision at the State and Local level, along with shared targets of development (in terms of number of e-Vehicles, charging infrastructure, etc.) and related operational roadmaps, including deadlines for phasing out of the most polluting vehicles, with guidelines for Regions.

- Enhancing the installation process of public and private charging stations by removing all the financial, regulatory and legislative stumbling blocks.

- Setting ambitious targets for clean vehicle procurement by public authorities, whose new purchased fleets shall be 100% clean, defining a rigorous time frame, such as 2025 or 2030.

Energy Efficiency Deployment

- Giving continuity to the incentivizing mechanisms, foremost the Eco-Bonus, on a multi-annual base and optimizing their implementation procedures.

- Setting up a statewide outreach program to increase stakeholder awareness – primarily but not exclusively aimed at residential homeowners and businesses – on energy efficiency benefits via the introduction of an instrument with the potential to be priced by the market and consequently increase the value of the interventions made by residents over time.

-Devising innovative financial schemes, for energy efficiency technologies that can be guaranteed by a financial institution under an agreement with an industrial player, to support the uptake of energy efficiency technologies with medium-long payback period.

Enhancing Collaboration Between Governmental, Industry, and Research Networks

- Creating a national State Innovation Lab focused on electrification technologies, by empowering the role of the already existing research institutions having activities in closely related fields and with the mission of acting as enabler of technological transfer between research institutions and the private sector, easing the "go-to-market" mechanisms of electrification technologies (starting from the ones with the highest potential, e.g. heat pumps, LED lamps, electric drives and electrochemical storage systems).

Strengthening State Capabilities on Electric Emerging Technologies

- Launching statewide programs for the R&D activity of companies operating in the electric technologies sector, relying upon public-private partnership schemes and the pre-procurement tool.

- Launching a infrastructure and electrification subsidy programs to sustain research initiatives with a social impact and economic return and with a supply mechanism that favors the creation of consortium involving all the players along the value chains and guaranteeing all the phases from research to implementation.

Diffusing Awareness About the Benefits of Electrification

- Increasing the awareness about the electrification benefits via specific action directed towards public opinion (via a statewide communication campaign based on recurring cycles), policy-makers and institutional stakeholders (via the definition of a function providing policy assessment in terms of sustainable development in the energy sector) and the business community (through a permanent forum focused on electrification technologies).

- Holding Local and Statewide Events aimed at promoting electrification, greenhouse gas reduction, and energy efficiency practices.

Potential Roles of Utilities in Supporting Beneficial Electrification

The Utilities and Network Operators can act as a key enabling factor, sustaining the technological evolution and the associated investment. The legislative and regulatory scenario should properly incentivize utility necessary investment on its own network, both in digitalization and renewal, with commitments to cope with the integration of an increasing amount of renewables, the spread of extensive network of charging infrastructure for electric vehicles and a higher share of electricity in final-user consumption. Furthermore, it is necessary to define rules and responsibilities of the various network operators (TSO and DSOs) in line with the on-going state regulatory framework, especially concerning the coordination of distributed energy resources.