Energy Storage Deployment Risk Mitigation

Electricity Advisory Committee

Office of Electricity
Department of Energy

Maryland Public Service Commission

June 20, 2019

State Policies

- Promote Energy Storage
  - Up to $750,000 in Tax credits through January 15, 2020
    - 30% of Project Cost
      - Residential $5,000
      - Commercial $75,000
- Environmental
  - Regional Greenhouse Gas Initiative (RGGI)
    - 45% below 2005 levels by 2020, and additional 30% by 2030
  - U.S. Climate Alliance – Paris Accord
    - 28% below 2005 levels by 2020

Energy Storage Legislation

- SB 715 Energy Storage Technology Study
  - Department of Natural Resources Report
    - Regulatory Reforms
    - Market Incentives
- SB 573 Energy Storage Pilot Project Act
  - Demonstrate Attributes
  - Cost Recovery

Environmental Legislation

- SB 516 Clean Energy Jobs Act
  - 50% Renewables by 2030
  - 14.5% Solar Carve-out
  - 1200 MW Offshore Wind

Transforming the Distribution Grid

- Public Conference 44 (PC 44)
  - Distributed generation
  - Electric vehicles
  - Energy storage
  - Rate design
- Guiding principles
  - Affordable
  - Reliable
  - Customer-centered
  - Environmentally sustainable

Energy Technology Storage Study

- Attributes
  - Peak shaving
  - Resilience
  - Infrastructure deferral
  - Ancillary services
  - Integrating renewables

Energy Technology Storage Study

- Barriers
  - Cost/Financing
  - Ownership/Rate structure
  - RTO markets
  - Interconnection/Permitting
  - Multi-use protocols
  - T&D system long-term plans

Energy Storage Working Group

- Working Group Task
  - Resource for customers and distribution grid asset
  - Criteria for evaluating utility investment and compensation
- Proof of Regulatory Concept Program
  - Reports (January 2019 and April 2019)
    - Value Stacking
    - Pilot Programs

Energy Storage Conference

- Technical Conference (March 2019)
  - Cost-Benefit
  - Rate Impact
  - Restructured State Implications

Energy Storage Pilot Project Act

- IOUs pilot commercial/regulatory models
  - Utility owns and controls for grid reliability; operates for wholesale sales
  - Utility owns and controls for grid reliability; 3rd party operates in wholesale
  - Utility controls for grid reliability; 3rd party owns and operates in wholesale
  - Virtual Power Plant – utility or 3rd party aggregator receives grid services from customer or 3rd party owned projects; customer or 3rd party uses project when not providing grid services

Pilot Program Features

- Cumulative size of all projects 5-10 MW, minimum 15 MWh
- Priority to projects that defer or replace existing or anticipated distribution need
- Projects that include grid benefits, ratepayer benefits, or meet state policy goals
- Proposals to estimate project costs and benefits including wholesale, societal, resilience, GHG

Pilot Program Timeline

- 6/1/19 Program begins
- 4/15/20 Utilities solicit proposals; apply to PSC for 1st project
- 6/15/20 Utilities solicit proposals; apply to PSC for 2nd project
- 4/15/21 PSC determination
- 2/28/22 Projects operational
- 7/1/23-25 IOUs submit project data
- 7/1/24 PSC interim report (costs, value streams)
- 12/31/26 Pilot Program ends; Assessment and Recommendations

Alternative Ratemaking (PC 51)

- Commission assessing innovative approaches to ratemaking
- Possible alignments
  - Non-traditional elements in rate base
  - State policy advancement

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