Rate Design and Net Metering Reform in NY

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Principles for Rate Design

• Bonbright (1961)
  • Simplicity, understandability, and feasibility;
  • Effectiveness at yielding revenue requirements, revenue stability, and rate stability;
  • Fairness in apportionment of costs and avoidance of undue discrimination; and
  • Efficiency in discouraging wasteful use.

• Acadia Center
  • Monthly customer charges should be no higher than the cost of keeping a customer connected to the grid and related customer service;
  • Other components of electricity rates can be reformed to align customer incentives with cost drivers and the value customers can provide to the electric system;
  • Ratepayers must be able to understand significant reforms and have a basis on which to respond and manage bills; and
  • Self-generation consumed on-site should be treated the same as efficiency and conservation.
Principles for Rate Design

• Regulatory Assistance Project
  • A customer should be able to connect to the grid for no more than the cost of connecting to the grid.
  • Customers should pay for grid services and power supply in proportion to how much they use these services and how much power they consume.
  • Customers who supply power to the grid should be fairly compensated for the full value of the power they supply.

• Related Propositions
  • Residential and small C&I customers should be considered separately from larger C&I rate classes
  • Ratchets and maximum functions are inefficient, particularly for small customers, and not customer-friendly or market-friendly
  • Gradualism for customers should be examined holistically
  • Rates should be forward-looking and reflect long-run marginal costs
Where are We Going?

• Consumer-friendly utility regulatory system that facilitates energy efficiency, clean distributed generation, storage, and beneficial electrification and provides equitable access to clean energy programs

• Long-term vision of transactive market
  • New markets, products and services may need to be created
    • Delivery
    • Environment and public health
  • Continued attention on protection of low-income and vulnerable populations

• Need short- and medium-term reforms in advance of long-term vision
  • Track 2 Order contained short-term directives on C&I demand charges and residential VTOU rates
  • VDER Phase One Order directed new mass market net metering framework for January 1, 2020
Overview of Short-Term Recommendations

- Mass market customers
  - Customer charge reform
  - Options to reform volumetric rates
  - Monetary crediting and removal of SBCs from credit value
  - Implement Track 2 Order directive on VTOU rates, customer education & tools

- Larger C&I customers
  - Implement Track 2 Order directive on demand charges
Customer Charge Reform

- New York has high residential customer charges
  - National Grid is $17 in NY, but $5.50 in MA and $5 in RI
  - ConEd is slightly below the weighted average for NY
- Connecticut is in the process of reform
  - Reduced from $17.25 to $9.67 for United Illuminating
  - Generic proceeding is currently underway
Customer Charge Reform

- Acadia Center testimony in National Grid rate case estimated residential customer charges should be between $5.57 and $8.30
- Lower customer charges mean lower bills for the majority of customers
  - 61% of bills are below the mean for National Grid
  - Median consumer would save $1-2 per month
  - 300 kWh consumer would save $4.50-$6 per month
- Low-income customers generally use less electricity
  - In National Grid, residential average is 639 kWh per month, but low-income average is 612 kWh per month
- Better incentives
  - 1-2 cent increase in volumetric rate if current rate structures are otherwise maintained
  - Less incentive to master meter or disconnect from grid
- Should also consider single family versus multi-family
  - Lower cost to connect individual units in multi-family
Options to Reform Volumetric Rates

• Seasonal delivery rates
  • Higher delivery rates in summer months that drive system costs
  • More efficient and better linked to cost causation
  • Mitigates potential impacts on electric heating customers due to lower customer charges

• Acadia Center proposal for Distribution Reliability Charge
  • Includes distribution costs that are not part of cost of connection and do not vary based on energy or demand
  • Billing determinant would be a rolling average of net kWh consumption over the prior 12 months
  • Monthly floor of zero so net metering customers cannot factor negative consumption into average
  • Would not be included in value of net metering credits
  • Applies to all customers, with very minimal impacts on customers without net energy metering
Monetary Crediting and SBCs

- Volumetric crediting is generally a barrier to accurate valuation of exported energy
- VDER Phase One Order recognized this and ordered switch to monetary crediting for projects on value stack
- All other NEM projects should be converted to monetary crediting as well
- This allows for removal of system benefit charges and transition charges from credit value
  - These elements are clearly not related to the value of DER
Residential VTOU Rates

- Track 2 Order issued on May 19, 2016
- Order required:
  - Proposal to improve existing VTOU rates
  - Analysis comparing to other jurisdictions
  - Promotion and education tool
- Existing VTOU rates often have extremely broad on-peak periods and no seasonal variation for delivery
  - Not well linked to cost causation
  - Does not allow for significant customer response
- These reforms must be implemented significantly in advance of default TOU rates
C&I Demand Charges

• Track 2 Order issued on May 19, 2016
• Order required:
  • Examination of C&I demand charges to see whether they can be made more time-sensitive
  • Considered in each rate case or in filing by April 1, 2017
• Individual non-coincident peak demand charges are not well linked to cost causation
• Gradual steps can be taken to improve C&I demand charges in short term
• Timing considerations
  • If not addressed in current rate cases, next opportunity will not be until 2021 – 5 years after Track 2 Order
  • Need to start reforms now to make further gradual changes down the road
Overview of Medium-Term Recommendations

• Mass market customers
  • Default time-of-use rates for many, but not necessarily all, customers
  • Phase 2 VDER mass market net metering reform
    • Time-of-use netting for net metering customers
    • Import rates are same as default TOU rates for other customers
    • Import rates and export credits are identical for energy and capacity
    • Import rates and export credits differ in key ways for delivery value, and environmental and public health value

• Larger C&I customers
  • Continue to make demand charges for delivery better aligned with cost causation
  • Continue improving VDER value stack for export credits
Default Time-of-Use Rates

• Requires roll-out of more sophisticated metering
  • Benefits of new investments must be sufficient to justify the costs
• Bill protections should be considered as part of transition
  • “Hold harmless” or shadow billing
• Design elements
  • Limit to 2-3 time periods per season
  • 2-6 hour peak periods provide reasonable ties to cost causation, significant price differentials, and allows for customer response
  • Could include critical peak pricing
• Low-income and vulnerable populations can be exempted from default TOU rates – opt-in instead
  • Very low consumption customers could be exempted as well
Mass Market Net Metering Reform

• Builds upon all of the previous mass market reforms
• Mass market NEM customers can be moved to default TOU rates
  • Netting would be done within each TOU period for each bill
  • NEM customers cannot opt back into monthly netting
• Import rates would be identical for NEM customers and other customers in rate class
• Value-based export credits need to be determined for the same TOU periods
  • Energy and capacity components should be identical for imports and exports
  • Environmental and public health values only applied to exports for clean DER
  • Delivery value requires further exploration
Key Takeaways

• There are numerous short-term options that would make electricity rates more efficient and NEM compensation better linked to value

• Gradual steps now will make medium-term reforms easier

• Mass market net metering reforms are closely linked to other mass market rate design reforms

• Reforms cannot wait until 2020 or 2021
Advancing the Clean Energy Future

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Background – Electricity Rates

- All Sectors – NY is 8th out of 51
- Residential – NY is 7th out of 51
Background – Electricity Bills

• Residential – NY is 34th out of 51

Source: EIA