



# Acadia Center

Advancing the Clean Energy Future

## Rate Design and Net Metering Reform in NY

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# Principles for Rate Design

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- 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

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- 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



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# Where are We Going?

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- 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



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# Overview of Short-Term Recommendations

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- 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



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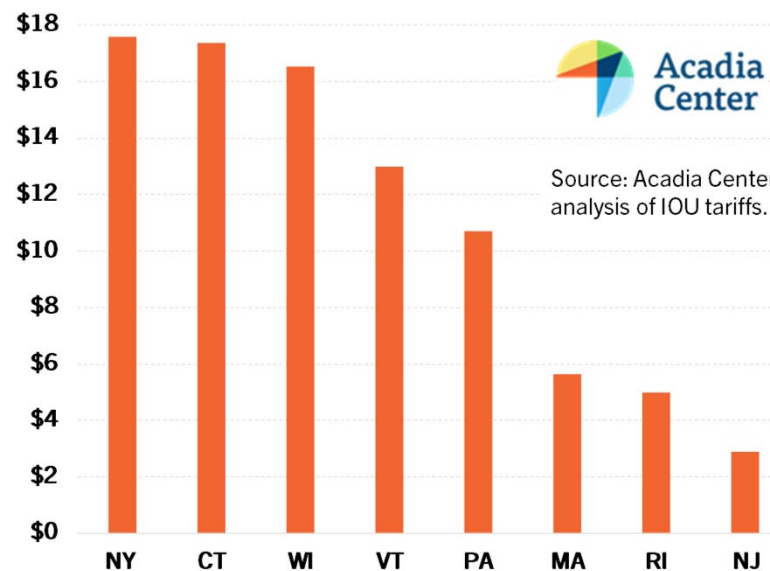
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# Customer Charge Reform

- 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



Source: Acadia Center analysis of IOU tariffs.



# Customer Charge Reform

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- 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

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- 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



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# Monetary Crediting and SBCs

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- 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



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# Residential VTOU Rates

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- 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



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# C&I Demand Charges

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- 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

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- 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



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# Default Time-of-Use Rates

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- 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



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# Mass Market Net Metering Reform

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- 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



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# Key Takeaways

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- 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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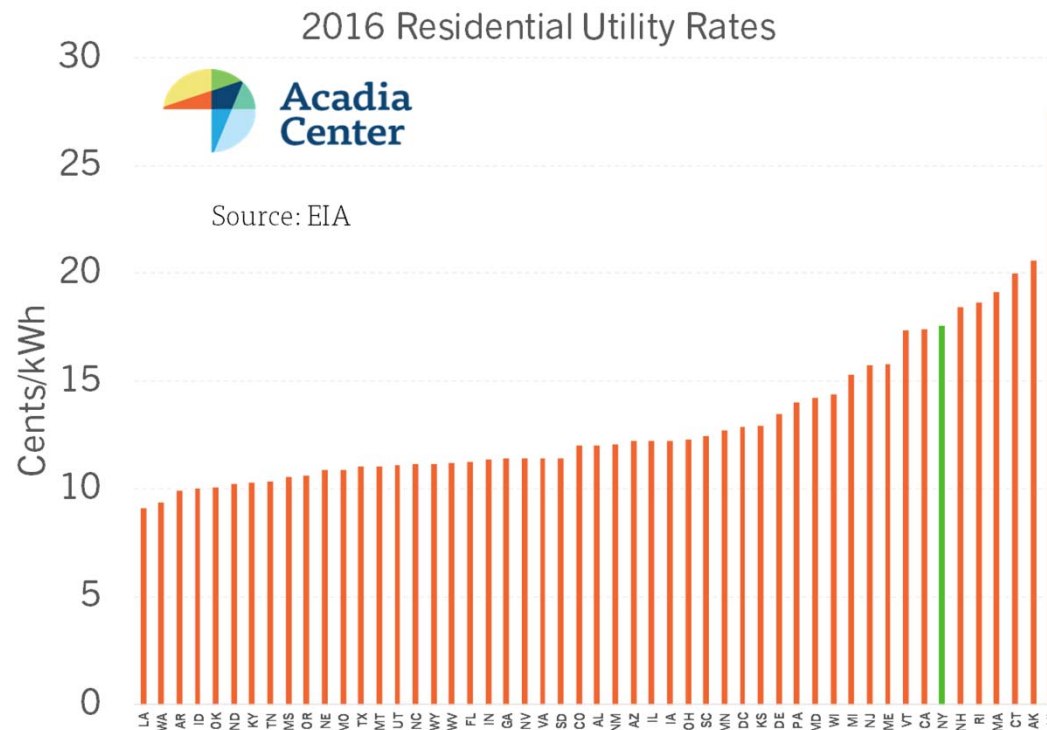
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# Background – Electricity Rates

- All Sectors – NY is 8<sup>th</sup> out of 51
- Residential – NY is 7<sup>th</sup> out of 51





# Background – Electricity Bills

- Residential – NY is 34<sup>th</sup> out of 51

