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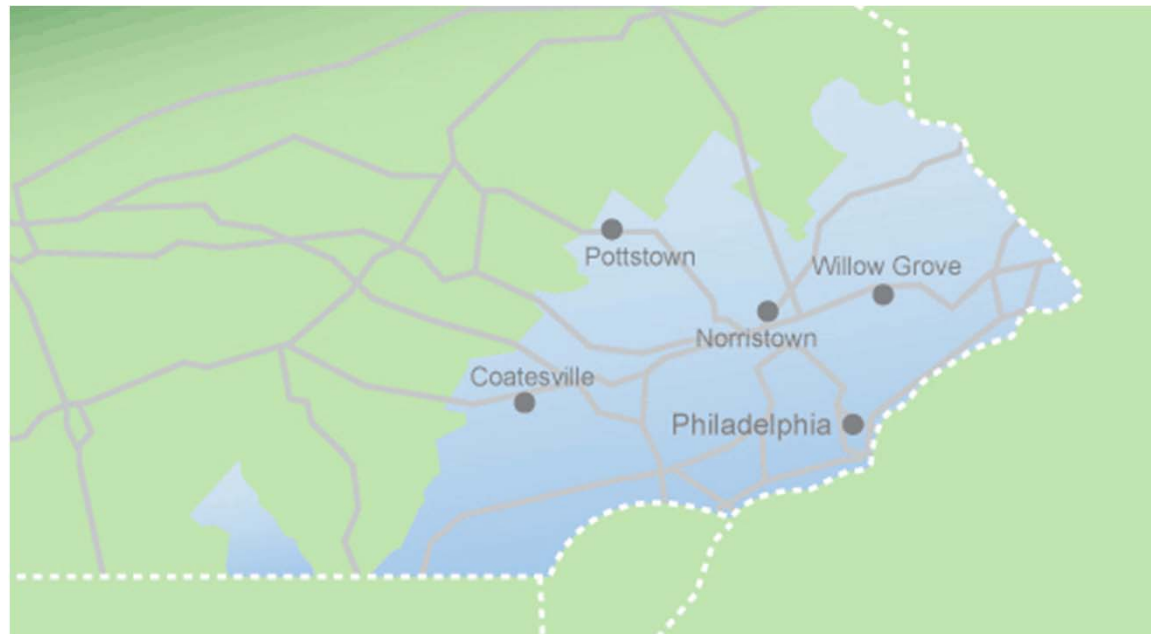
# Bidding Energy Efficiency Into The Wholesale Market “Challenges For The Utility”

September 30, 2013 MADRI Working Group Meeting

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# About PECO

Based in Philadelphia, PECO is an electric and natural gas utility subsidiary of Exelon Corporation, the nation's largest competitive energy provider. PECO is the largest electric and natural gas utility in Pennsylvania, serving approximately 1.6 million electric customers and 494,000 natural gas customers in southeastern Pennsylvania.

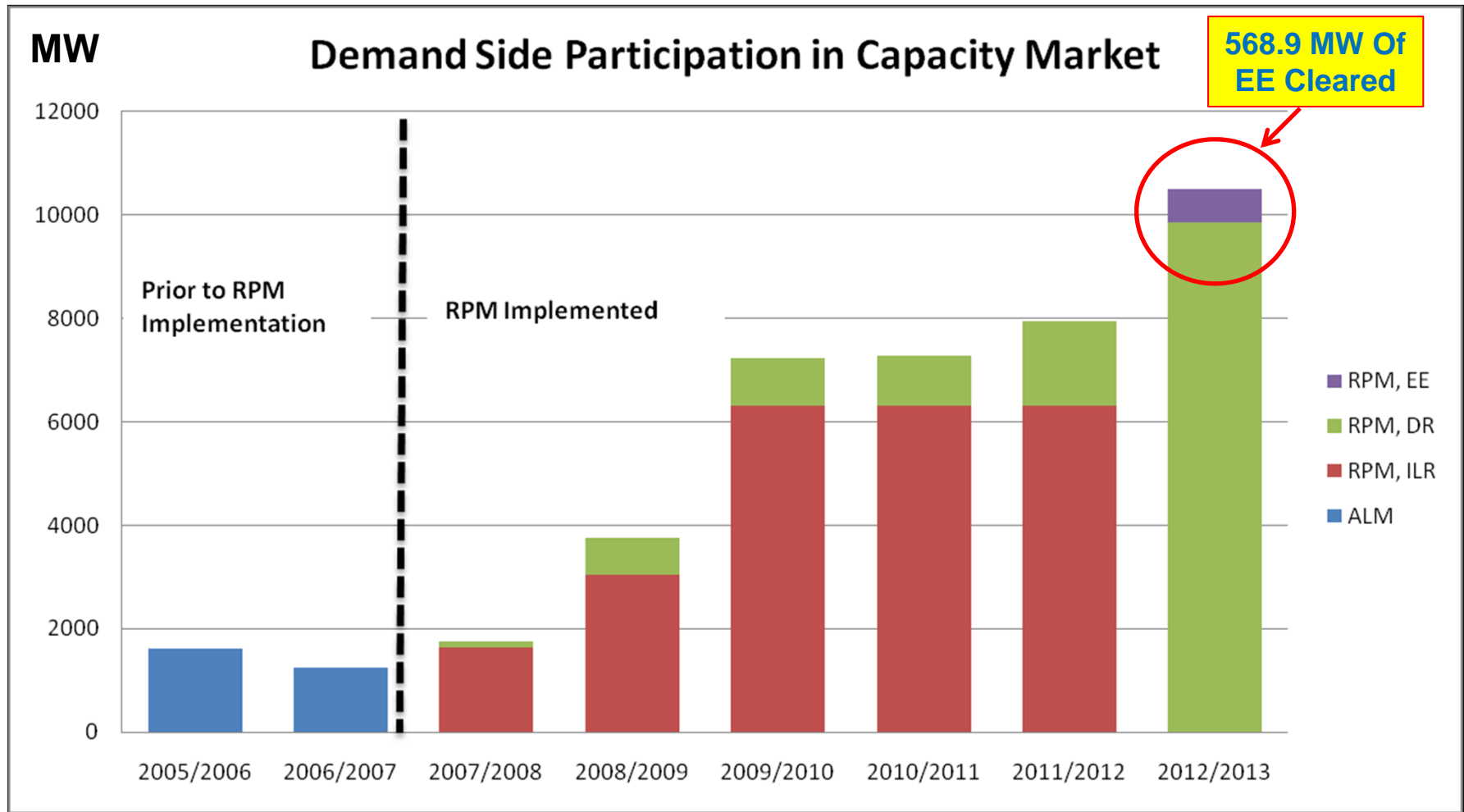


# DR From EE Allowed Since 2012-13 PJM DY

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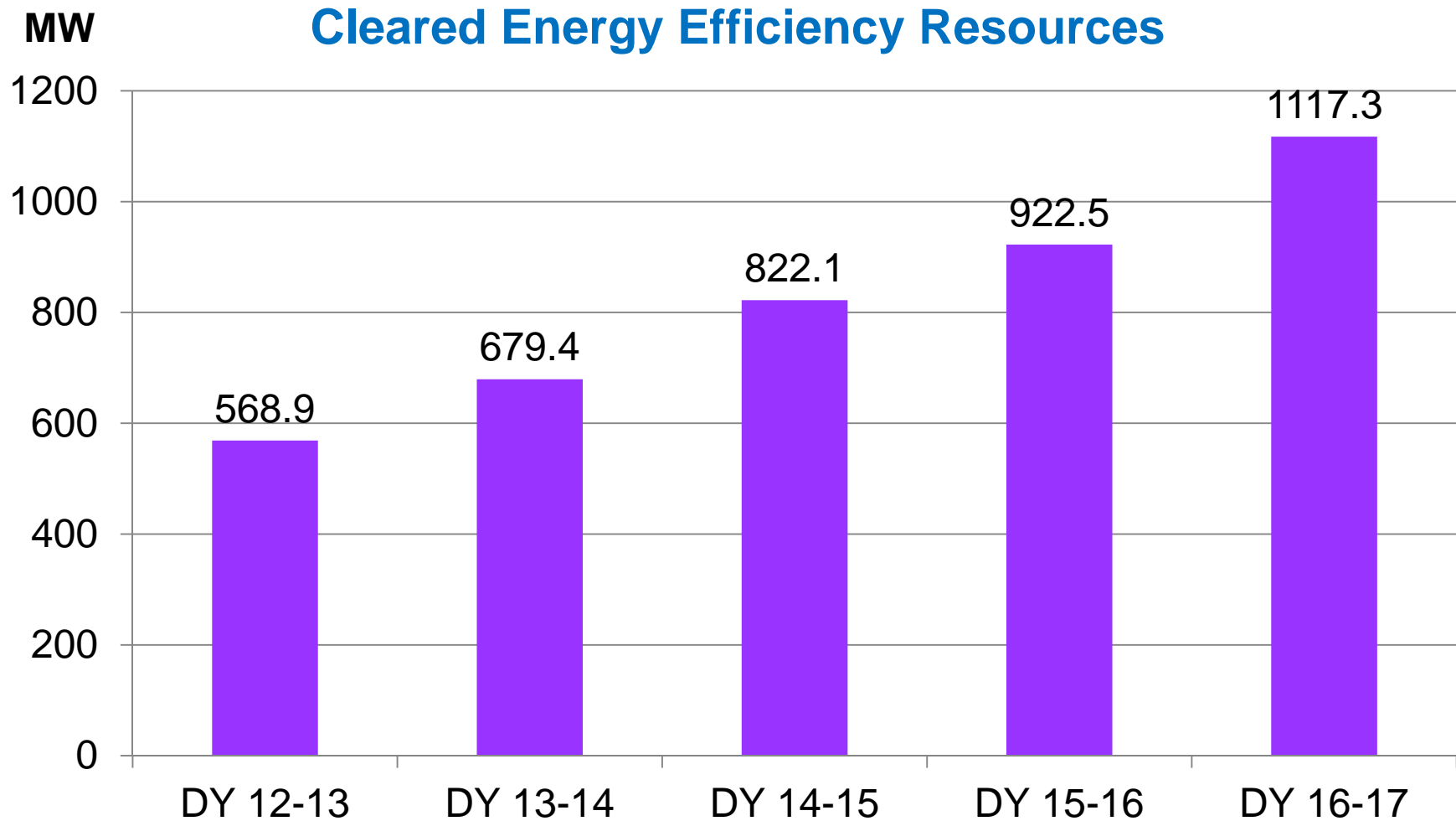
- ✓ Resultant DR from Energy Efficiency (EE) permitted to offer as capacity resource beginning in 2012-13 Delivery Year (DY)
- ✓ An EE resource is defined as a project, measure or group of measures that achieve a permanent, continuous reduction in electric energy consumption not reflected in the peak load forecast used for the Base Residual Auction (BRA) DY (PJM)
- ✓ EE is offered into the BRA 3 years in advance as are other DR resources
  - Can offer into subsequent incremental auctions also

# EE Participated For The 1<sup>st</sup> Time In 2012



Source: PJM 2012/2013 RPM Base Residual Auction Results

# EE Resources Nearly Double In 1<sup>st</sup> 5 Years



Source: PJM 2016/2017 RPM Base Residual Auction Results

# Challenges Faced By Utilities

- ✓ Regulatory and wholesale market synchronization
  - In PECO's case the Act 129 compliance calendar (Phase I, II, III and beyond)
  - The 3 year lead time associated with bidding into PJM's Base Residual Auction (BRA)
    - Will there be a DR compliance component in the future ? (There isn't one now, but there was one in 2012...)
  
- ✓ Development and acceptance of evaluation, measurement and verification protocols which accurately measure performance of mass market (residential) EE programs
  - Lighting
  - Appliance Rebate
  - Whole Home Energy Audits
  - Behavioral Based Programs, etc.
  
- ✓ C&I EE measures are more easily tracked (generally pre/post metering) yet challenges remain relative to timing and implementation. Our experience has shown that large projects can sometimes be delayed for a host of reasons not always under PECO or the resource's control

# Like Legacy DR – DR From EE Must Perform

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- ✓ As new Automated Meter Infrastructure (AMI) is fully implemented throughout the industry, the resultant availability of big data will further enhance the ability to perform EM&V for mass market EE programs
  - But the ability to measure residential customer usage on an interval level is not enough
  - Many programs, will still rely on statistical sampling and customer surveys as is the standard today
  - Disciplined program design, the ability to successfully navigate the Regulatory and Market timing challenges will:
    - Promote greater participation of utilities in the bidding of EE into the wholesale market
    - Influence future EE program designs accordingly



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