

Energy Efficiency and Conservation and Demand Side Response Initiatives

PA PUC Update Meeting

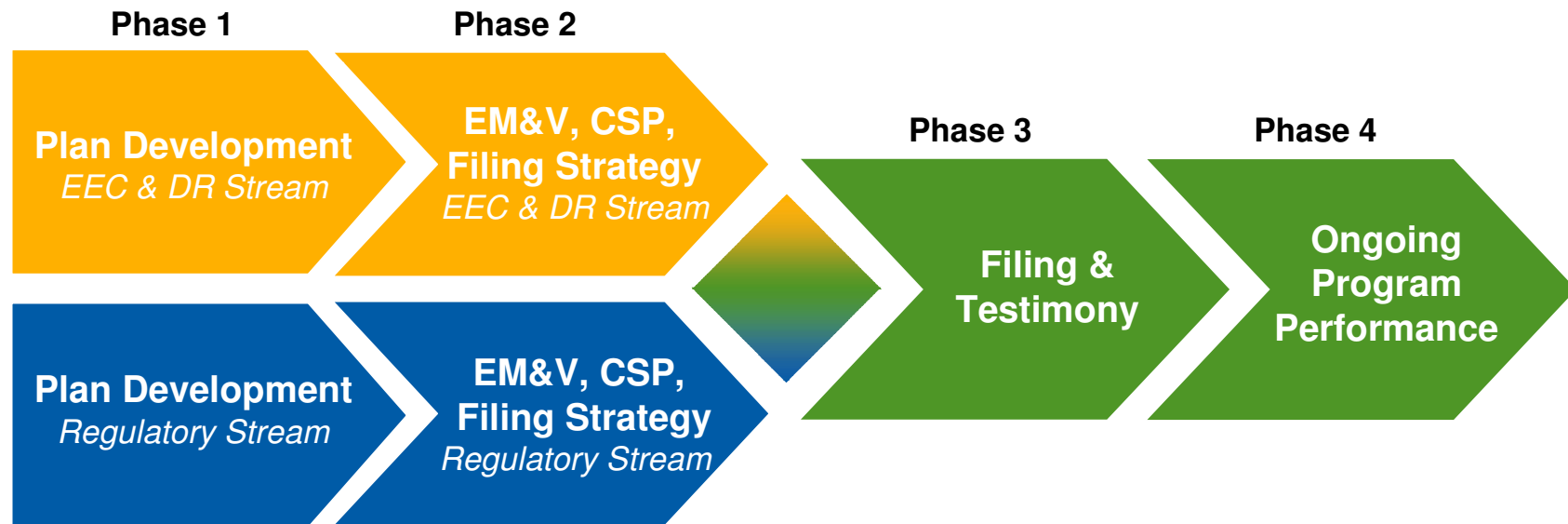


June 19, 2009

Agenda

- Project Phases and Approach
- Plan Development
 - EE Program Planning & Implementation Process
 - Achievable Energy Efficiency Potential
 - Program Summaries
 - Demand Response Programs
- Stakeholders Meetings
- Regulatory Strategy
- Questions and Comments

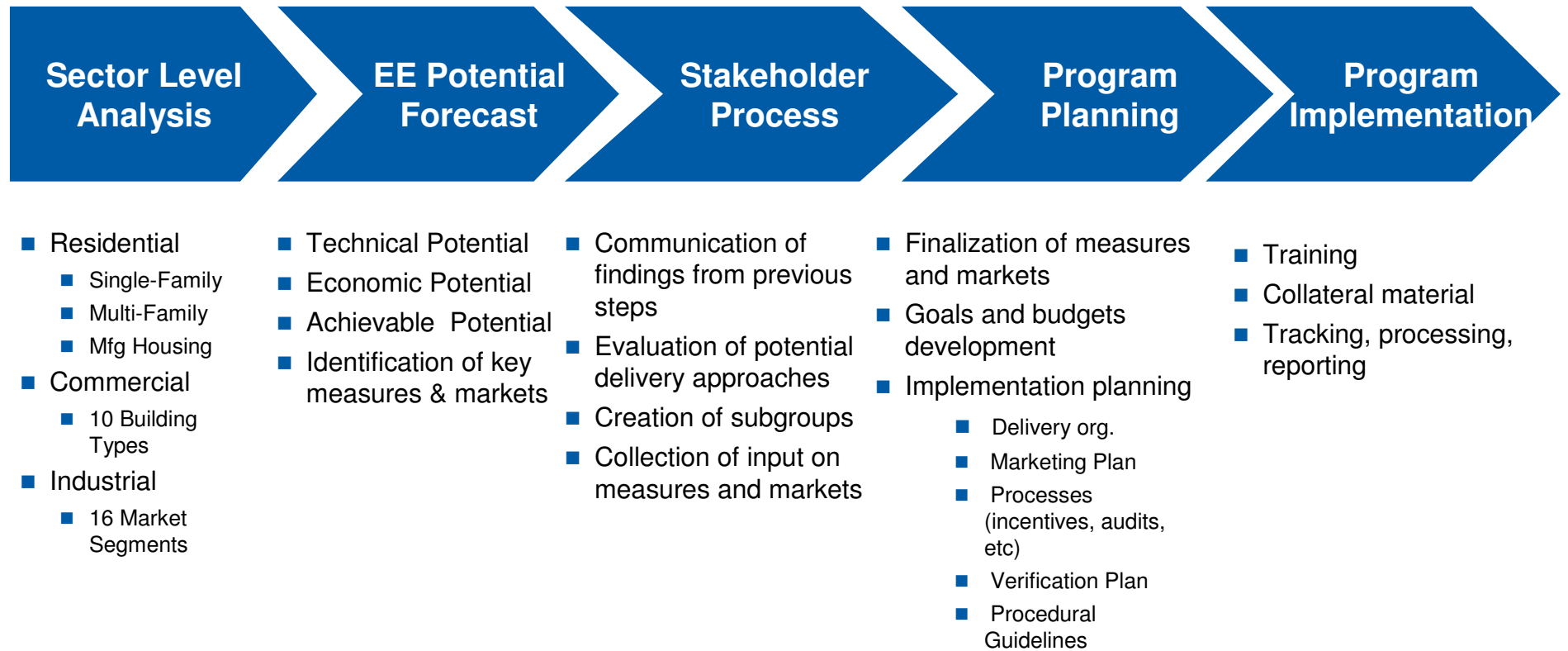
Project Phases and Approach



Note: EEC = Energy Efficiency and Conservation
DR = Demand Side Response

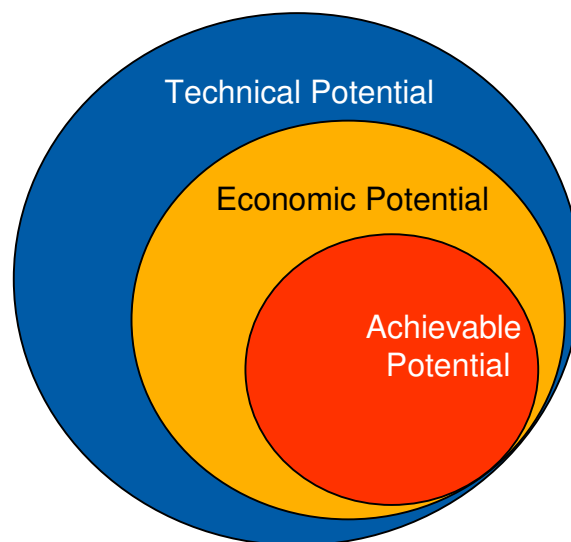
Plan Development

EE Program Planning and Implementation Process



Achievable Energy Efficiency Potential

- Technical and economic potentials are produced using quantifiable algorithms
- “Achievable Potential” is a qualitative assessment incorporating:
 - Customer probability for acceptance (payback period based)
 - Maximum annual capture rates
 - Scaling or calibration to previous program results
 - Aware and willing population assumptions



Program Summaries

Residential market sector is characterized by the following principal segments:

- Single-family
 - 73% sector share
 - High transaction cost (minimal per-unit savings)
 - Substantial aggregate savings potential
- Multifamily
 - 26% sector share
 - Complex barriers (bill payers not building owners; varied building construction; high transactional cost)
- Residential (33% incentives)
 - Prescriptive rebates (online and direct mail; contractor delivery)
 - Home performance programs (contractor delivery)
- Low-income program
 - Leverage local government partnerships (50% incentives)
 - Target 8,500 (refrigerators, CFLs, weatherization)
- Solar photovoltaic program

Program Summaries

Commercial umbrella program

- Provides a level of service available to *all* customer sectors
- Puts in place standard terms, conditions, operating processes and incentive levels (prescriptive and custom)

Commercial sub-programs (specialized programs focused on overcoming participation barriers of the major market segments)

- Office buildings
- Health care
- Retail stores and restaurants
- Education
- Local government agencies

Program Summaries *(continued)*

Industrial umbrella program

- Provides a level of service available to *all* customer sectors
- Puts in place standard terms, conditions, operating processes and incentive levels (prescriptive and custom)

Industrial sub-programs (specialized programs focused on overcoming participation barriers of the major market segments)

- Primary metals
- Chemical manufacturing
- Mixed segments

High-Level Description of C&I Sub-Programs

- Program services
 - Energy audits (raise awareness of EE opportunities, costs and savings)
 - Assist with processes, procedures, applications (remove hassle factor)
 - Incentives (offset the incremental cost of high-efficiency equipment)

Prescriptive Incentives

Lighting	32.6%
HVAC	45.8%
Refrigeration	60.9%
Office Equip	50.0%

- Market segment focus (provide relevant expertise)
 - Installation project oversight and technical assistance
 - Operations training
- Sub-program delivery
 - Door-to-door outreach by implementers with market segment expertise
 - Development and dissemination of specific marketing materials (direct mail, email and internet)
 - Networking with trade associations, chambers of commerce, etc.

Demand Response Programs Under Consideration

- Residential air conditioner cycling program
 - Purpose: Cycle central air conditioners and hot water heaters during peak hours
 - Technology: Expand existing switch program as more cost-effective than communicating programmable thermostats
- Small and mid-size commercial and industrial program
 - Purpose: Cycle central air conditioners in office, retail, restaurant, assembly, etc.
 - Technology: Build on successes of residential programs
- Large commercial and industrial (over 300 kW)
 - Callable curtailable loads in lighting, HVAC and other loads
 - Backup generators dispatched manually or automatically
- Program operation on average 4 hours per event and up to 12 events per summer
- Incentives
 - Residential and small/mid commercial/industrial based on number of air conditioners (e.g. \$32/summer for air and \$10/summer for water heating)
 - Large commercial and industrial based on kW savings

Stakeholders Meeting

Stakeholders Meetings

- Who were considered to be stakeholders?
 - Consumers
 - Consumer advocates
 - State and local government
 - Chambers of commerce
 - School districts
 - Community based organizations
 - Environmental groups
 - Conservation service providers
 - Vendors for energy efficiency and demand response products and technologies
- Initial stakeholders meeting held on April 3, 2009
- Subgroup meetings held April 22 and 23, 2009
 - Residential sub-program
 - Commercial and governmental sub-program
 - Industrial sub-program
 - Demand response sub-program
 - Breakout sessions held for each sub-program
- Follow-up meetings with CSPs and customers are ongoing
- In addition, meetings with Electric Generation Suppliers are being held

Outcome of Stakeholders Meeting

- Identified
 - Issues of concern
 - Areas of interests
 - Opportunities to partner with entities

- Modified
 - Program assumptions
 - Program designs

Regulatory Strategy

Development of Regulatory Filing

- Develop case based upon PA PUC format, which became final May 7, 2009
- Complete additional analysis based upon TRC and TRM orders
- Develop additional case components
 - Petition
 - Testimony
 - Policy
 - Cost recovery surcharge development
 - Program designs and technical analysis

Questions and Comments

>> END OF PRESENTATION
