



Mid-Atlantic Distributed Resources Initiative (MADRI) Meeting

Betty Ann Kane
Chairman
Public Service Commission
of the District of Columbia

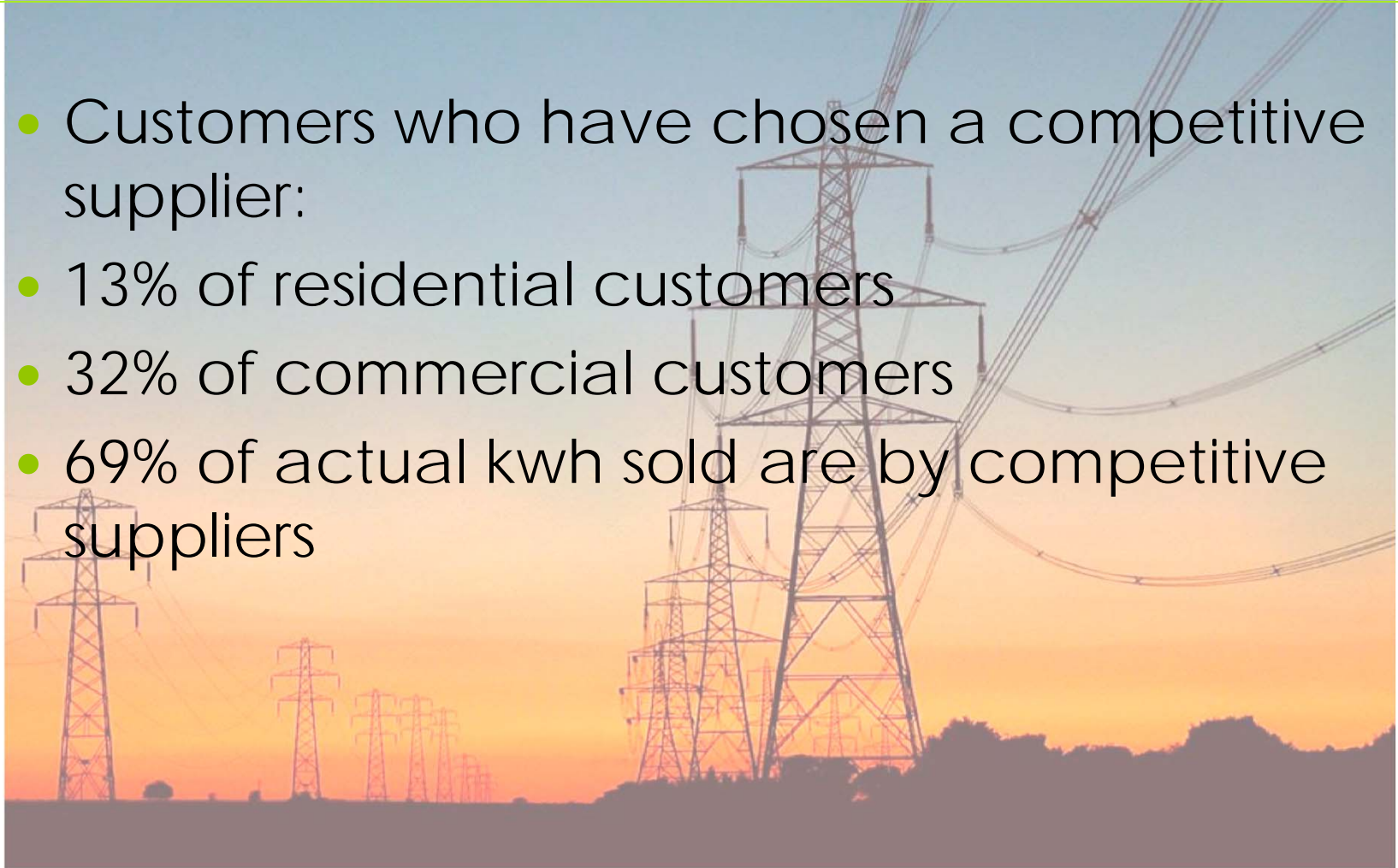
October 6, 2015

The Retail Electric Competition & Consumer Protections Act of 1999

- Required Pepco to sell its power plants-became a distribution company only
- Commission regulates Pepco's distribution rates and service
- Commission prohibited from regulating the price of electricity
- Consumers may purchase electricity from any licensed supplier
- Customers who don't choose are placed in Standard Offer Service- Pepco is the designated administrator
- Price of Standard Offer Service is determined by competitive auctions under Commission rules
- All suppliers covered by Commission rules for consumer protection

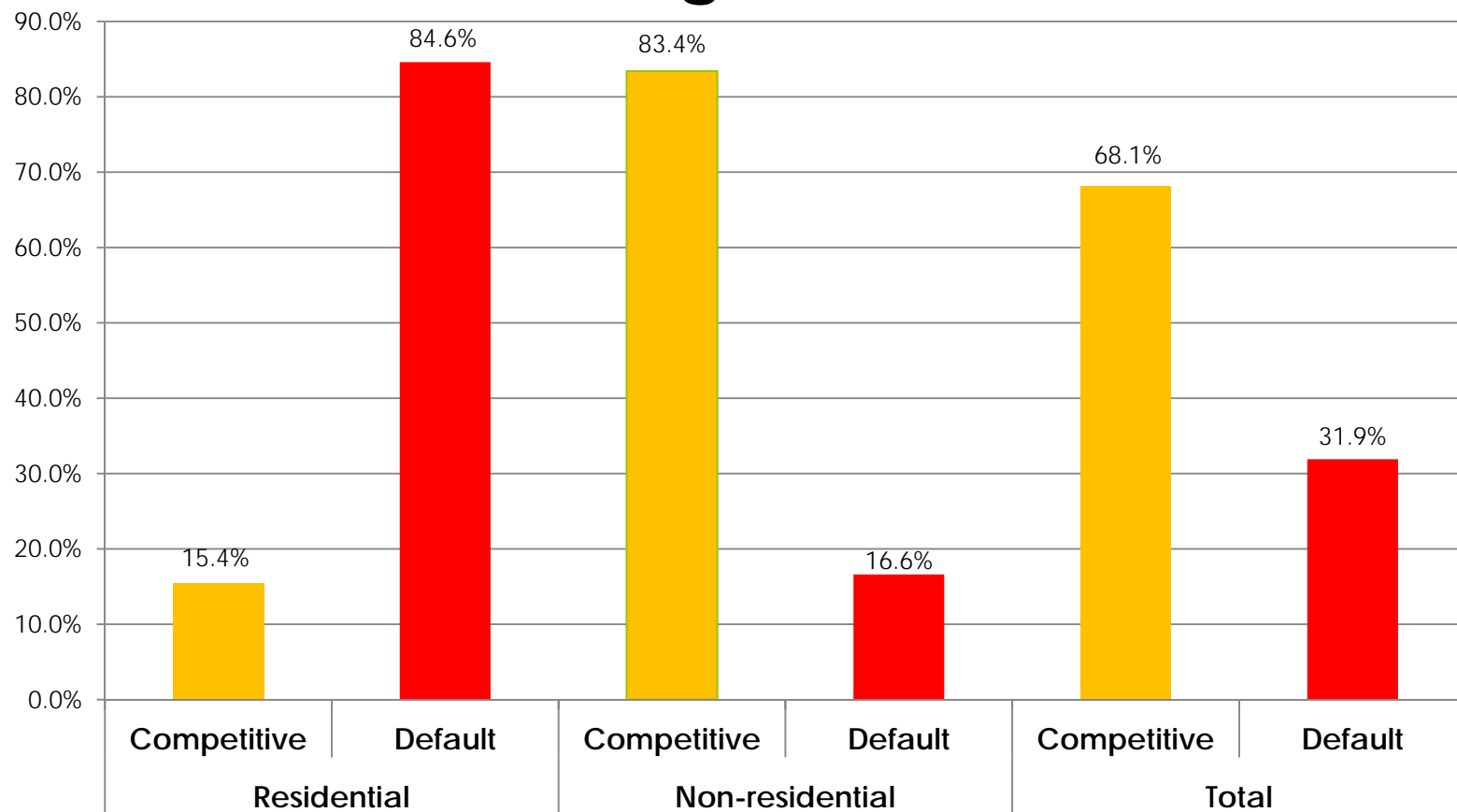
Customer Choice of Electricity Supplier

- Customers who have chosen a competitive supplier:
- 13% of residential customers
- 32% of commercial customers
- 69% of actual kwh sold are by competitive suppliers



Market Shares for Electricity Load (MW)

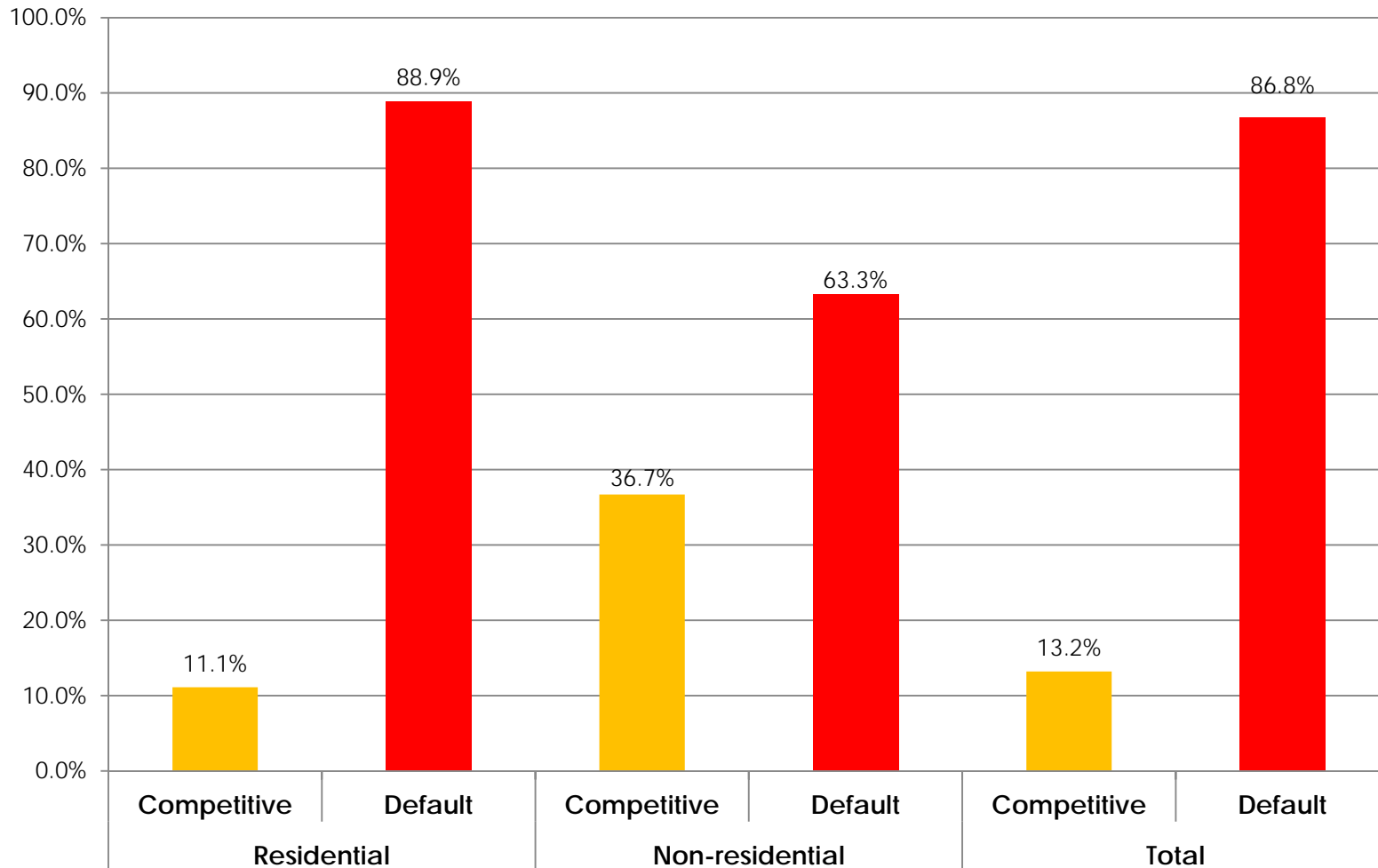
August 2015



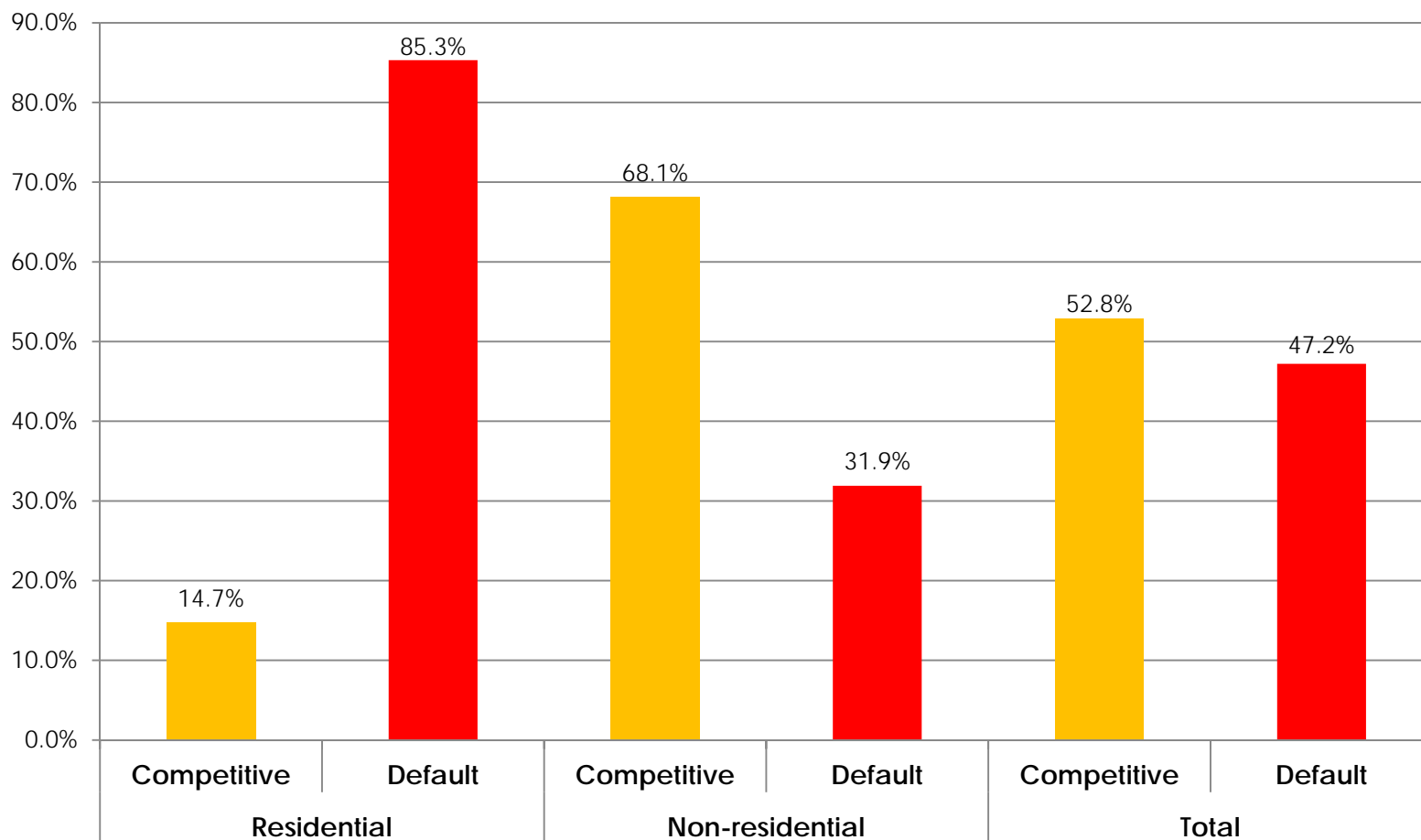
The Retail Natural Gas Supplier Licensing & Consumer Protections Act of 2004

- Opened the sale of natural gas to any supplier licensed by the Commission
- Washington Gas Light retains a monopoly over the distribution of natural gas to consumers
- The Commission regulates WGL's distribution rates and service
- The price of gas itself is determined by the market
- Commission does not regulate the price of gas sold by competitive suppliers
- Commission monitors the purchase of gas by WGL for customers who have not chosen another supplier
- All suppliers are subject to Commission's consumer protection rules

Market Share Natural Gas Customers September 2015



Market Shares for Natural Gas Usage July 2015

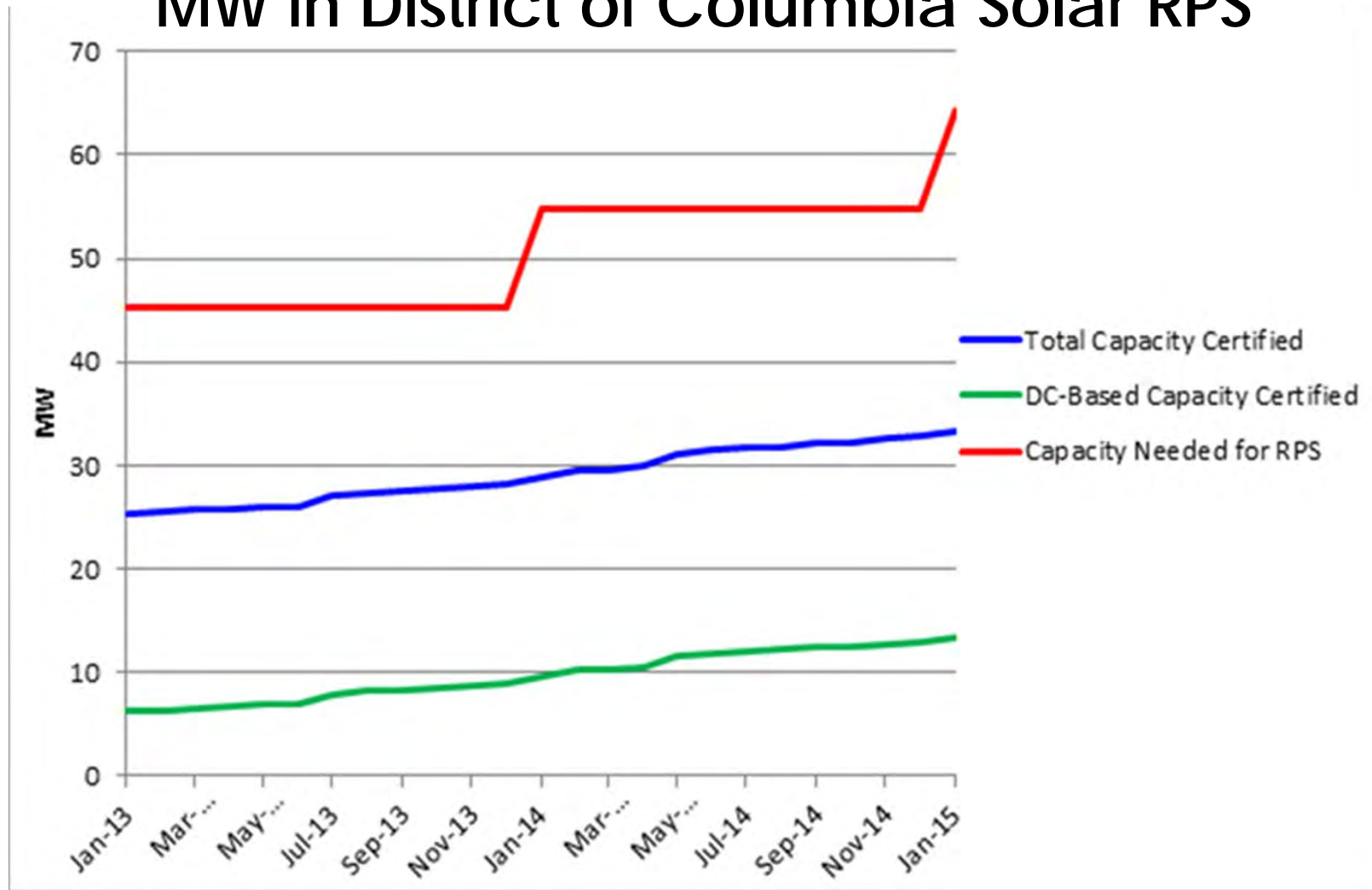


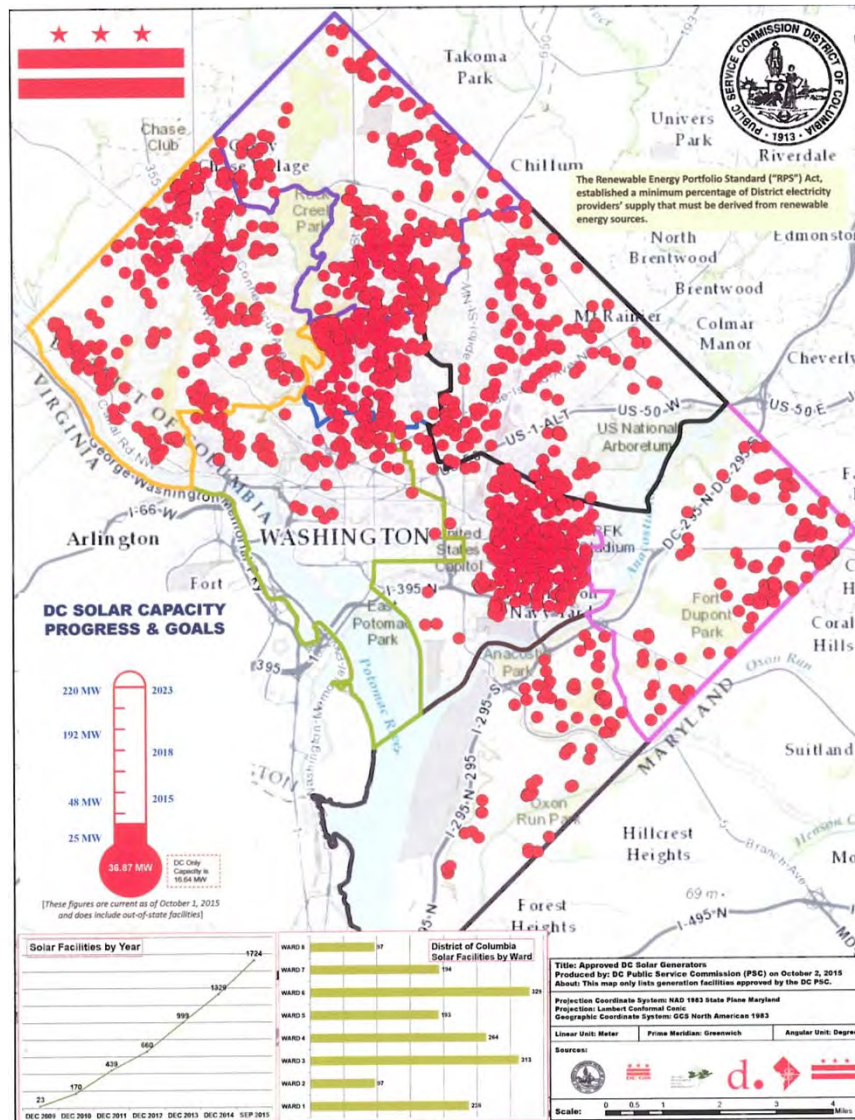
Distributed Generation Amendment Act of 2011

Annual Increase in RPS

Year	Tier 1	Tier 2	Solar
2011	4%	2.5%	0.40%
2012	5%	2.5%	0.50%
2013	6.5%	2.5%	0.50%
2014	8%	2.5%	0.60%
2015	9.5%	2.5%	0.70%
2016	11.5%	2%	0.825%
2017	13.5%	1.5%	0.98%
2018	15.5%	1%	1.15%
2019	17.5%	0.5%	1.35%
2020	20%	0%	1.58%
2021	20%	0%	1.85%
2022	20%	0%	2.175%
2023	20%	0%	2.50%

MW in District of Columbia Solar RPS





Solar facilities in the District certified by the Commission. (Does not include all installed facilities.)

RPS Compliance

- "Grandfathered" Supply is Declining as Expected
 - 2011 96% exempt
 - 2012 71% exempt
 - 2013 37% exempt
 - 2014 18% exempt

RPS Compliance

- Compliance Fee Payments Are Rising

- 2008 \$ 399,320
 - 2009 \$ 429,320
 - 2010 \$ 55,850
 - 2011 \$ 229,500
 - 2012 \$ 4,900
 - 2013 \$ 699,140
 - 2014 \$6, 308,710


Community Solar




CREA Highlights

- Participants may use any choice supplier
- Output is purchased by SOS provider
- Credit is at the SOS Small Commercial Rate
- Credit is for energy only

- In October 2013 the District of Columbia passed a Community Solar Act, the Community Renewable Energy Act Amendments of 2013, (CREA) which:
 - Established Community Renewable Energy Facilities (CREFs) of up to 5 MW located in the District which use Tier 1 renewable resources
 - District ratepayers can subscribe to CREFs and be entitled to the value of the output of the CREF based on their ownership (subscription) share and received as bill credits on the PHI/Pepco portion of their electric bill.
 - All CREF output is purchased by the District's Standard Offer Service (SOS) provider (currently the LDC – PHI/Pepco)
 - The value of a CREF's output is based on the SOS rate for Small Commercial Facilities for subscribed energy and PHI/Pepco's DC LMP for any unsubscribed energy.

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- CREFs are directly interconnected to the PHI/Pepco distribution grid and may have any legal form of ownership:
 - For-profit
 - Non-Profit
 - Cooperative
 - Governmental
 - The Commission has jurisdiction over CREF interconnection, prices, subscriber/Pepco relations and CREF/Pepco relations.
 - Other CREF oversight is the responsibility of the Mayor and/or her designee.

- The Commission developed rules for their portion of CREA:
 - Notice of Proposed Rulemaking (NOPR);
 - First NOPR – September 2014
 - Second NOPR – January 2015
 - Final Rules were published May 2015
- In June 2015 PHI/Pepeco filed a proposed Procedural Manual for implementation and administration of CREFs.
- The Commission is currently evaluating comments and reply comments on the Manual.
- To this date the Commission is the only agency which has developed rules regarding CREFs.

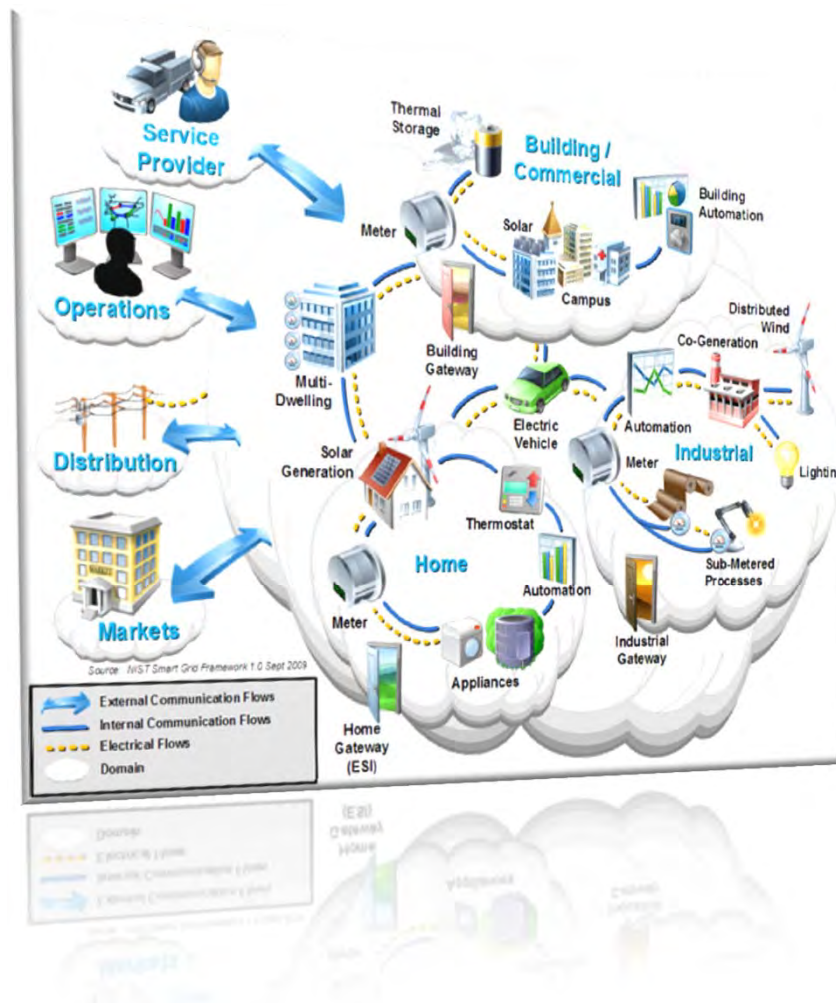
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- The main issue surrounding CREFs is the value of CREF output received by CREF subscribers:
 - The Commission followed a strict statutory interpretation and set the value at the SOS rate for Small Commercial Customers
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- Solar advocates have stated that this would make CREF subscribers “second class” solar generators as Net Energy Metering (NEM) customers receive the full retail rate including all \$/kWh charges on their PHI/Pepco bill:
 - Distribution charges
 - Taxes and fees
 - System benefit charges for energy efficiency programs
 - Low income subsidization charges.





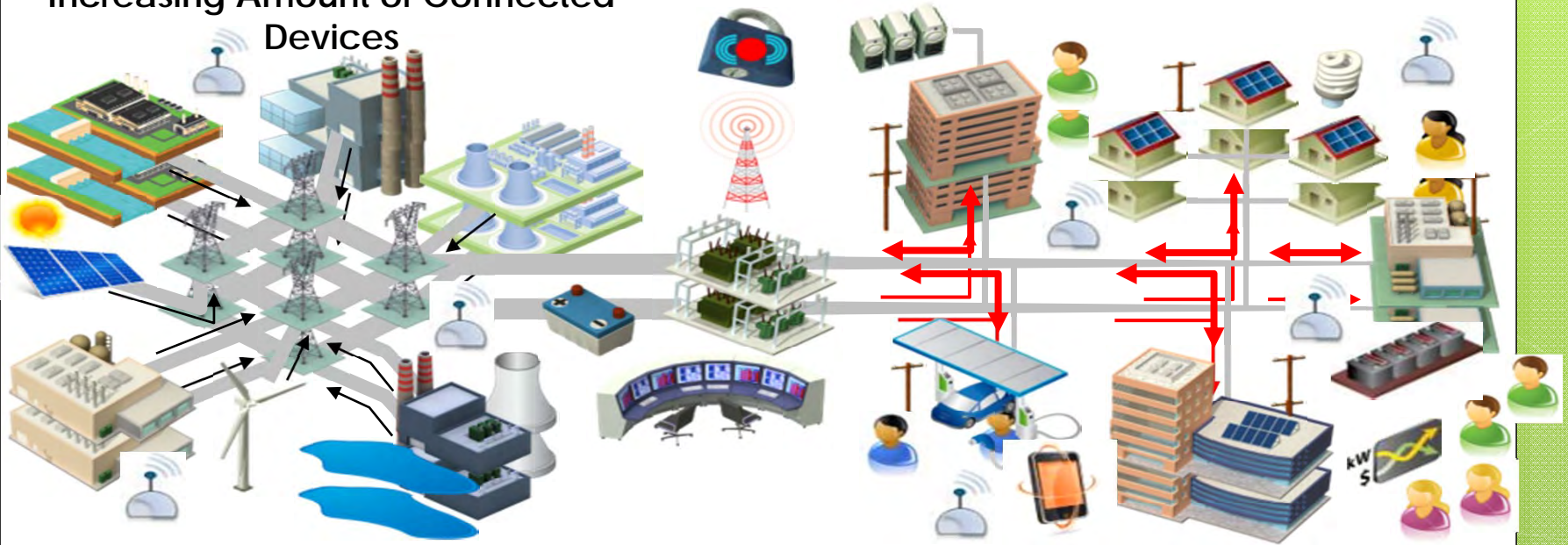
Modernizing the Energy Delivery System for Increased Sustainability



The marriage of smart grid (SG) technologies with distributed energy resources (DER) is changing fundamentally traditional utility operating paradigms, and the utility business. This has become more pressing as public policy encourages the development of DER owned by customers and third parties. We think it is vital, therefore, to understand the implications of these new technologies and policies.

How the Energy Delivery is Transforming

Increasing Amount of Connected Devices



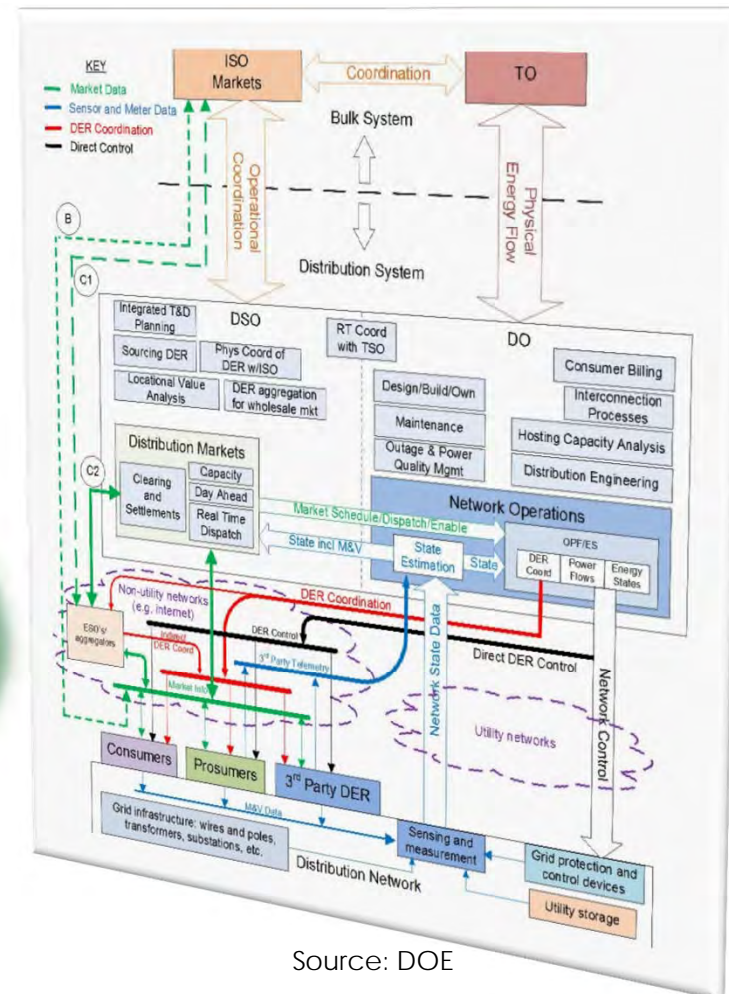
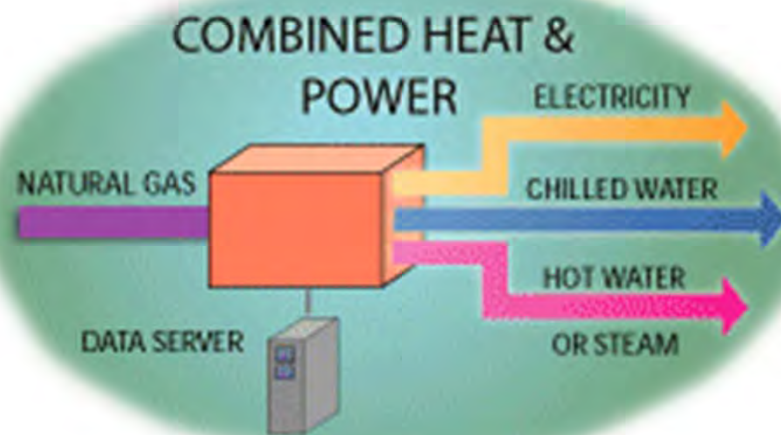
Communications is a Key Enabler for a more Flexible, Reliable and Interactive Power System

Source: EPRI

Combination of fast storage, power electronics (asynchronous generation) and advanced optimizing control will become a general purpose grid element as fundamental as power transformers and circuit breakers.

Legacy and New Technologies can make the energy delivery in the District more:

Reliable
Efficient
Interactive
Affordable
Sustainable



Source: DOE

Role of Natural Gas in delivering thermal and electric energy more efficiently. Distributed Energy Delivery Structure currently being considered in CA and NY.

Interactive implies greater visibility into the distribution system. Sustainable implies limited environmental impact, cost recovery reflects market reality, and increased reliance on local resources.

Public Policy Issues

The public policy issues relating to the evolving distribution system fall into several categories:

- o What planning process should be employed for the evolving grid?
- o How should the grid be designed and constructed?
- o How and by whom should the grid be operated?
- o How and by whom should the grid DER marketplace be designed and managed? What services behind the meter can be provided and by whom?

Kick-Off Workshop

October 1st, 2015, Public Service Commission



The End



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