

Evolution of Clean Energy Policies at DC PSC



DC Public Service Commission
Centennial
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Richard E. (Rick) Morgan
Commissioner, 2003 - 2011
Commission Staff, 1985 - 1991



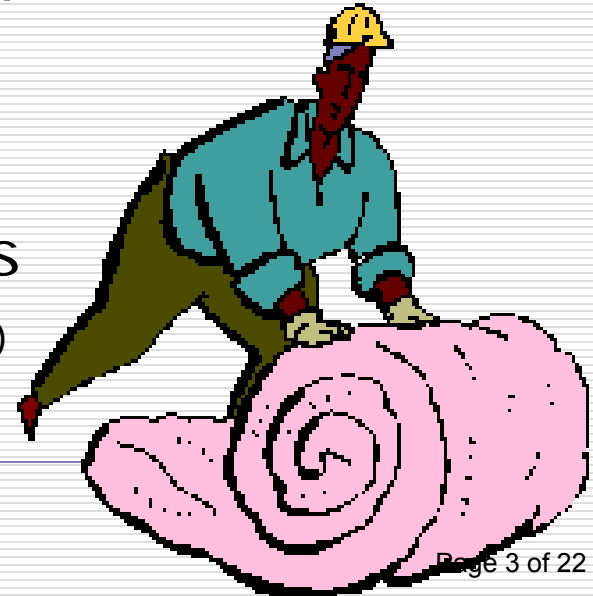
Overview

- Policies under traditional regulation (1970 - 1999)
 - Early PSC activities re: clean energy
 - PURPA/NECPA era
 - Key policy decisions re: clean energy
- Emergence of competitive retail markets
- Restructuring era in DC (1999 →)
 - Restructured electricity & gas markets
 - Clean energy legislation & policies
- Postscript: Leadership roles of PSC commissioners & staff



Early PSC activities re: environment & energy conservation (1970→)

- ❑ Seasonal electric rate differential (FC 541; 1970)
- ❑ Pepco to report environmental program expenditures (FC 568; 1972)
 - Rejected flattening of residential declining-block rate: “not convinced demand is price elastic”
- ❑ Inverted block added to residential rate
 - Low-usage residential customers spared rate increases (FC 596; 1973)



Early PSC activities re: environment & energy conservation (cont'd)

- Energy conservation “national goal” (FC 630; 1975)
 - Endorsed flattening of promotional rate designs;
 - Discounted “all-electric” rate to be phased out, but ruling reversed the following year (FC 651)
 - Reduced rate for all-elec. customers persists to this day
- Early intervenors:
 - Sierra Club/SHOCK
 - DC Power
 - Washington Urban League
 - DC Federation of Civic Assns.
 - DC City-wide Consumer Council



PURPA*/NECPA** era (1978-1990)



- Pepco pricing based on marginal cost
 - Adoption of TOD rates for large comm'l (FC 680; 1979)
- PSC Office of Economics created (1980)
- Federally-req'd Residential Conservation Service (RCS) program adopted for Pepco, WGL (FC 743; 1982)
- Mandatory TOD rates for ~800 largest residential electric customers (FC 759; 1983)

* Public Utility Regulatory Policies Act of 1978

** National Energy Conservation Policies Act of 1978

PURPA/NECPA era (1978-1990) (cont'd)

- ❑ Cogeneration & small power producers eligible to receive full avoided cost
(FC 757; 1983)
- ❑ "Kilowatchers" residential load control program approved
(FC 869; 1989)
- ❑ WGL directed to file marginal cost study
(FC 890; 1990)



Key DC PSC policy decisions re: clean energy (1988-90)

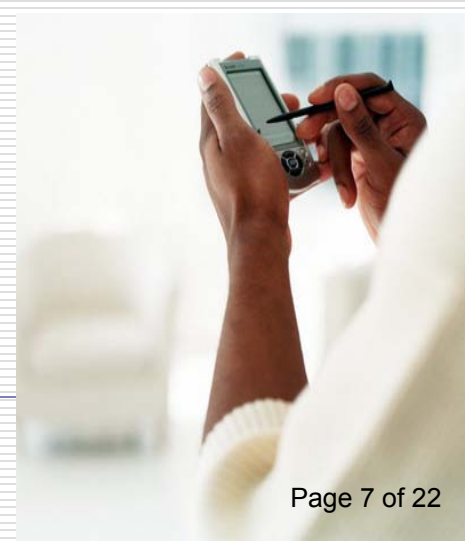
- 1988 ruling established PSC policy re: IRP*, DSM** & DG*** (FC 834-II; 1988)
 - >12 national experts (e.g. Lovins, Cavanagh, Wellinghoff); 133-page order
 - Adopt IRP process for Pepco, WGL, via working groups; plans due every other year
 - Require customer audits & pilot programs for energy efficiency & load management

more....

* least-cost integrated resource planning

** demand-side management

*** distributed generation



continued....



- Energy efficiency (EE) targets for commercial buildings, lighting; gas boilers/furnaces
- Explore residential load control & customer financing for EE measures
- Unsuccessful Residential Conservation Service replaced with “alternative state plan”
- Policies adopted re: alternative energy & cogeneration/small power production

Key DC PSC policy decisions re: clean energy (1988-90) (cont'd)

- Rate case ruling re: importance of energy efficiency (FC 889; 1990)
 - Pepco denied recovery of energy conservation expense due to non-compliance
 - Pepco's ROE reduced by 15 basis points for lack of commitment to energy conservation



II. Emergence of competitive retail markets



- ❑ Federal action to deregulate wholesale gas markets (1980s)
 - Enabled states' retail customer choice for gas
- ❑ PSC rulings re: retail competition for natural gas in gas tariff (GT) cases
 - WGL permitted to deliver other suppliers' gas
 - ❑ Dual-fuel interruptible customers only (FC 849; 1987)
 - ❑ Supplier choice for large commercial customers (GT96-2; 1998)
 - ❑ Supplier choice for residential customers (GT96-3; 1998-99)
 - ❑ Supplier choice for small commercial customers (GT97-3; 1999 - 2002)

Emergence of competitive retail markets (cont'd)



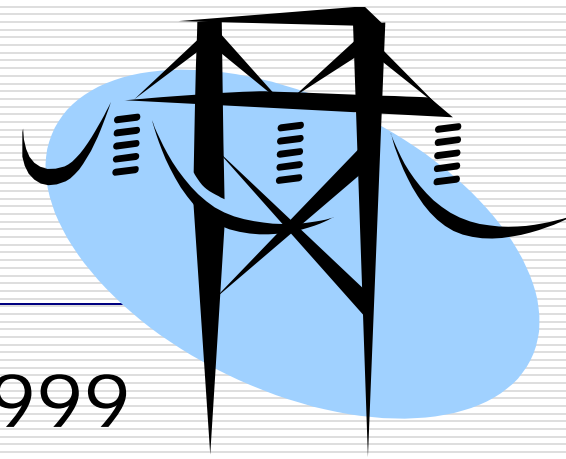
- Signs of competition emerge in electricity markets (1994 →)
 - Federal actions spur divestiture of utility generation
 - Demise of vertically-integrated utilities
 - CA, other states adopt retail competition
 - Public policy goals at risk

Competitive retail markets (more....)



- Settlement terminates IRP obligations for WGL, incl DSM programs (FC 921; 1998)
 - Last IRP plan filed by Pepco in 1998 (FC 917)
 - Specter of restructuring legislation put IRP, DSM on hold
 - Settlement approved re: prudence of Pepco's 1995-1999 DSM expenditures (FC 945; 1999)
- Reorganization of PJM Interconnection
 - Creation of robust electricity markets
 - Market-based dispatch r/t marginal cost

III. Restructuring era in DC (1999 - present)

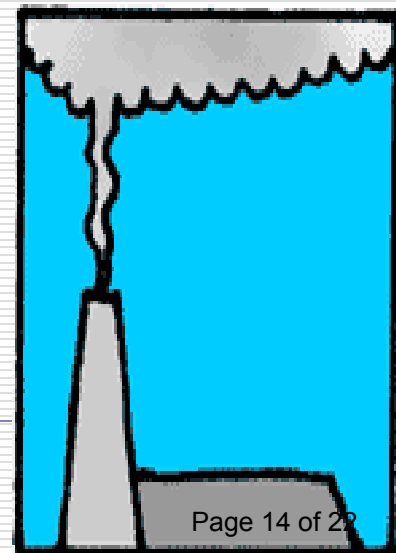


- Electricity Competition Act of 1999
 - Electricity restructuring underway in neighboring states
 - Authorized divestiture of most Pepco generation
 - Provided for retail electricity competition, with Pepco as default service provider; 4-year cap on rates
 - Unbundled Pepco distribution rates (regulated) from competitive generation & transmission rates (FC 945; 2001)

continued....

- As a “wires-only” utility, Pepco excused from existing IRP and DSM/EUM* requirements
 - Settlement deregulated Pepco’s EUM programs as of 1/1/2001 (FC 945; 2000)
- Created Reliable Energy Trust Fund (RETF) to support energy efficiency and renewables programs via non-bypassable surcharge
 - Programs managed by DC Energy Office, overseen by PSC
- Required fuel mix & (later) emissions disclosure by retail electricity providers

* energy use management



Developments since electricity restructuring in DC



- ❑ Natural Gas Act (enacted 2005)
 - Natural Gas Trust Fund (NGTF) supports efficiency & low-income programs re: natural gas
- ❑ Renewables Portfolio Std (RPS) (2005)
 - % of renewable content req'd for all retail electricity sales; ramps up through 2022 [2020]
 - ❑ Minimum solar component
 - Facilitated by tradeable RECs* f/ PJM & adjacent states; safety valve to control cost
 - Implementation by PSC

more...

* renewable energy credits

Developments since restructuring (cont'd)

□ PSC renewables policies

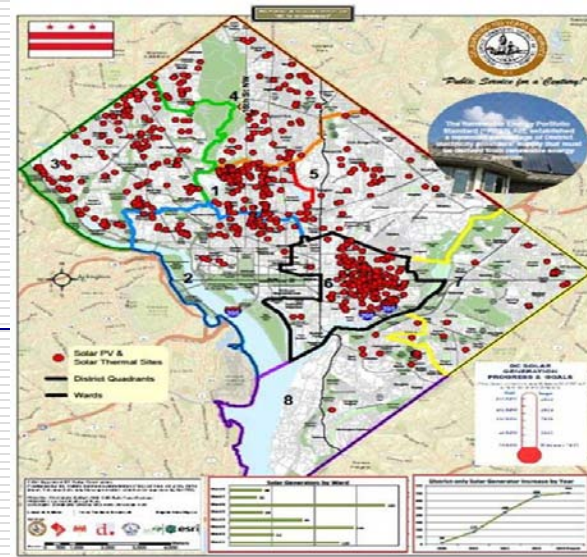
- Net energy metering (FC 945; 2005-10)
- Small generator interconnections (FC 1050; 2006-09)

□ Clean & Affordable Energy Act (2008)

- Sustainable Energy Utility (SEU) created
 - SETF superseded RETF & NGTF
 - PSC's oversight role over ratepayer-funded energy programs eliminated
- Stricter, accelerated RPS requirements

□ Distributed Generation Act (2011)

- RPS's solar component must be sourced from DC



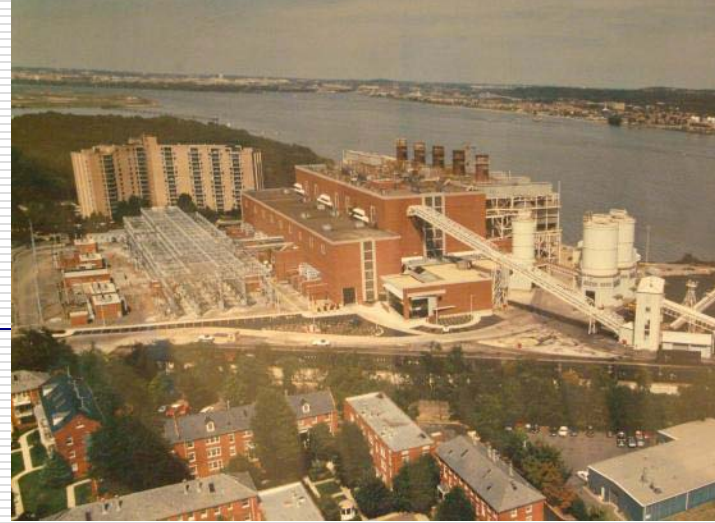
“Revenue decoupling” addresses incentives for energy efficiency

- ❑ Traditional ratemaking provides incentive for “throughput”
- ❑ Pepco’s “bill stabilization adjustment” approved (FC 1053-II; 2009)
 - Earlier Pepco decoupling mechanism had been rejected in 1994, along w/ proposed DSM surcharge (FC 929)
- ❑ WGL’s “revenue normalization adjustment” rejected (FC 1079; 2010)



Power supply & reliability issues

- Environmental concerns spark local opposition to power plants
 - Mirant threatened imminent shutdown of Potomac River plant (PRGS) in VA (August 2005)
 - Pepco & PJM cited threats to local reliability
 - PSC obtained US DOE order to continue operation of PRGS through 2007
 - PRGS in VA retired voluntarily in October 2012, following Pepco transmission upgrades
 - Benning & Buzzard peaking plants in DC retired June 2012, following Pepco transmission upgrades
 - District now ~100% dependent on imported power



DC is national leader re: smart grid



- SMPPI* plans smart metering pilot (2004)
 - Project jointly managed by PSC, OPC, Pepco, DC CUB, IBEW Local 1900 (FC 1002; 2002)
 - PowerCentsDC™ pilot demonstrates broad customer response to dynamic pricing (2008-09)
 - DC's pilot earns national recognition
- PSC exploration of advanced metering (FC 1056; 2007→)
- PSC exploration of dynamic pricing (FC 1083; 2011→)

* Smart Meter Pilot Program, Inc.



DC is national leader re: smart grid (cont'd)



- ❑ PSC approval of Pepco's direct load control program "Energy Wise Rewards" (FC 1086; 2011)
- ❑ 2009 Council action facilitated Pepco's city-wide rollout of advanced meters
 - *DC has nation's highest penetration of AMI **
 - PSC investigating AMI issues, incl data privacy, health & safety, feasibility of opt-outs (FC 1056; 2013)

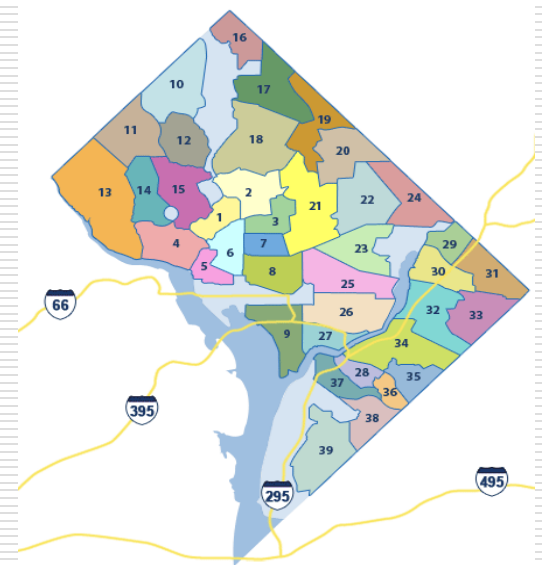


* automated metering infrastructure

Postscript: Leadership roles of DC PSC commissioners & staff

□ Leadership roles at nat'l & regional levels

- NARUC
- MACRUC
- MADRI
- OPSI
- NEEP
- NRRI



□ Published works on clean energy

- Cmr Ed Meyers & Grace Hu; Rick Morgan

*Thank
you!*

