

# VACAR Planning Task Force

Presentation to the  
VACAR Executive Committee

Web Conference  
May 21, 2010

# Planning Task Force Roster

Jennifer Connors

Alcoa

Mehdi Shakibafar

Dominion Virginia Power

Brian Moss

Duke Energy

Rick Anderson

Fayetteville PWC

James Manning

NCEMC

Mark Byrd

Progress Energy Carolinas

Philip Kleckley (Chair)

SCE&G

Jim Peterson

SCPSA

Douglas Spencer

SEPA

# Agenda

- VACAR and SERC Load, Capacity, and Reserves
- Generation Development Survey
- Transmission Development Survey

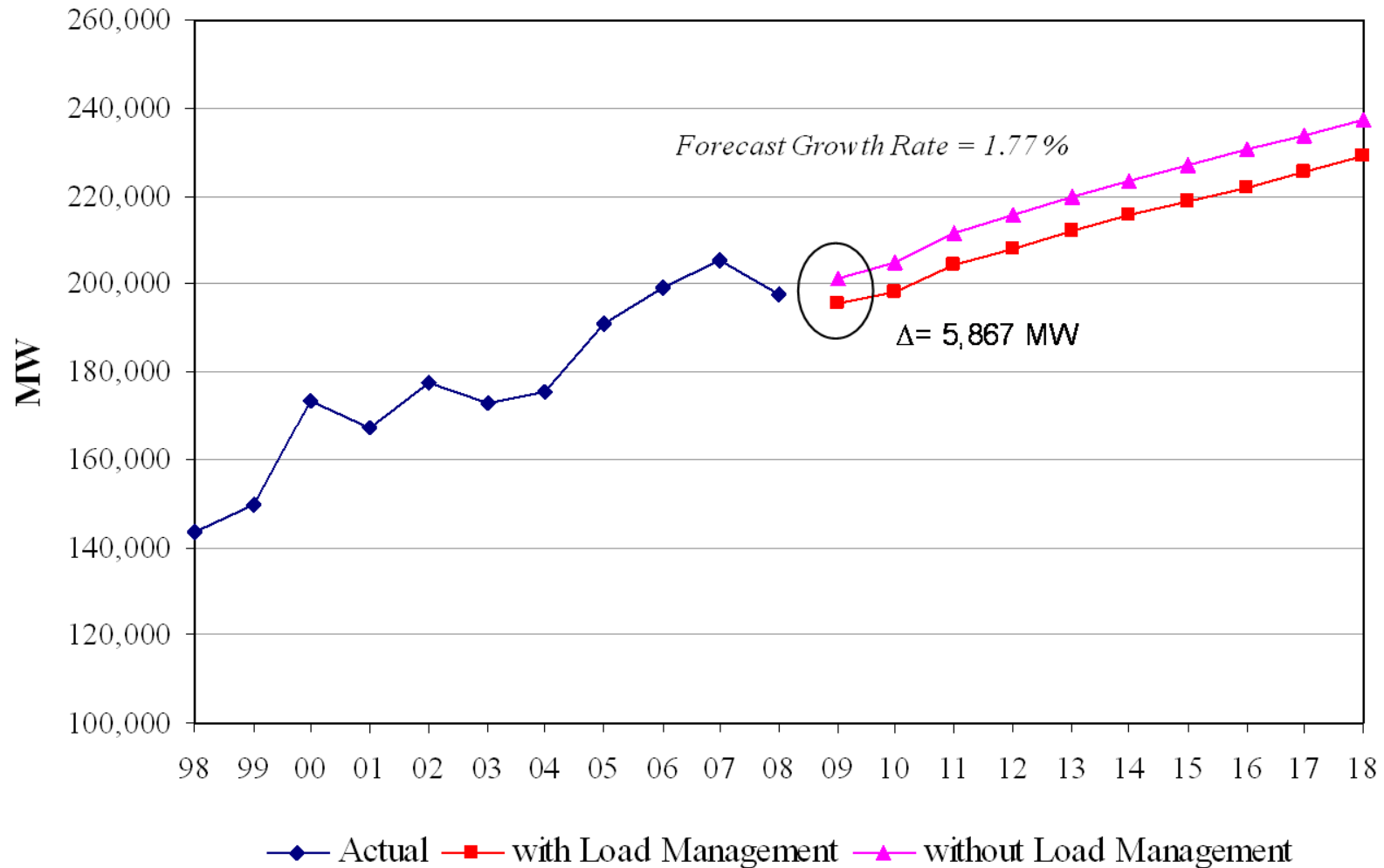
# VACAR and SERC Load, Capacity, and Reserves

James Manning  
NCEMC

Mark Byrd  
Progress Energy Carolinas

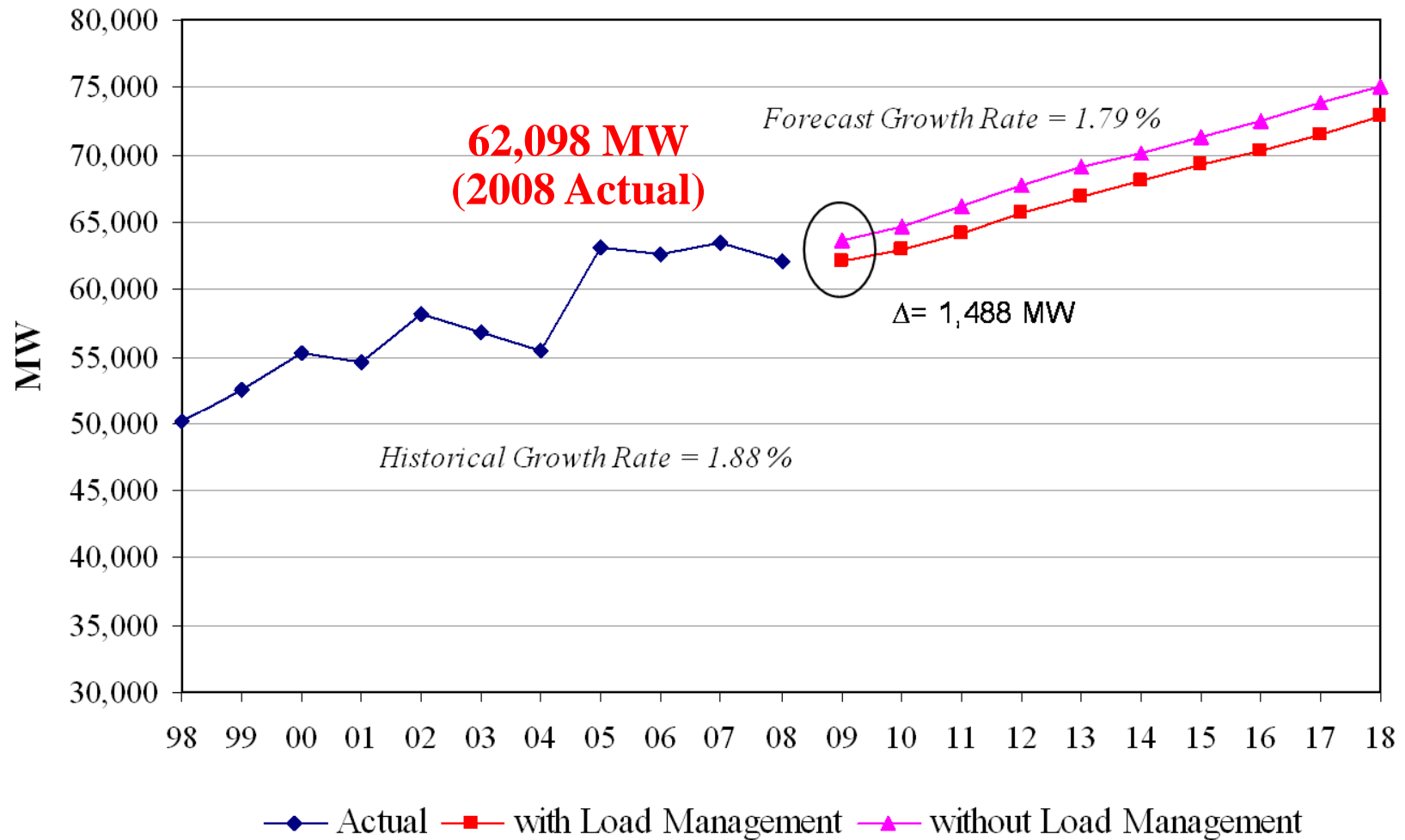
# SERC Region

## SERC Summer Peak Demand Historical Actual vs. 2009 Forecast

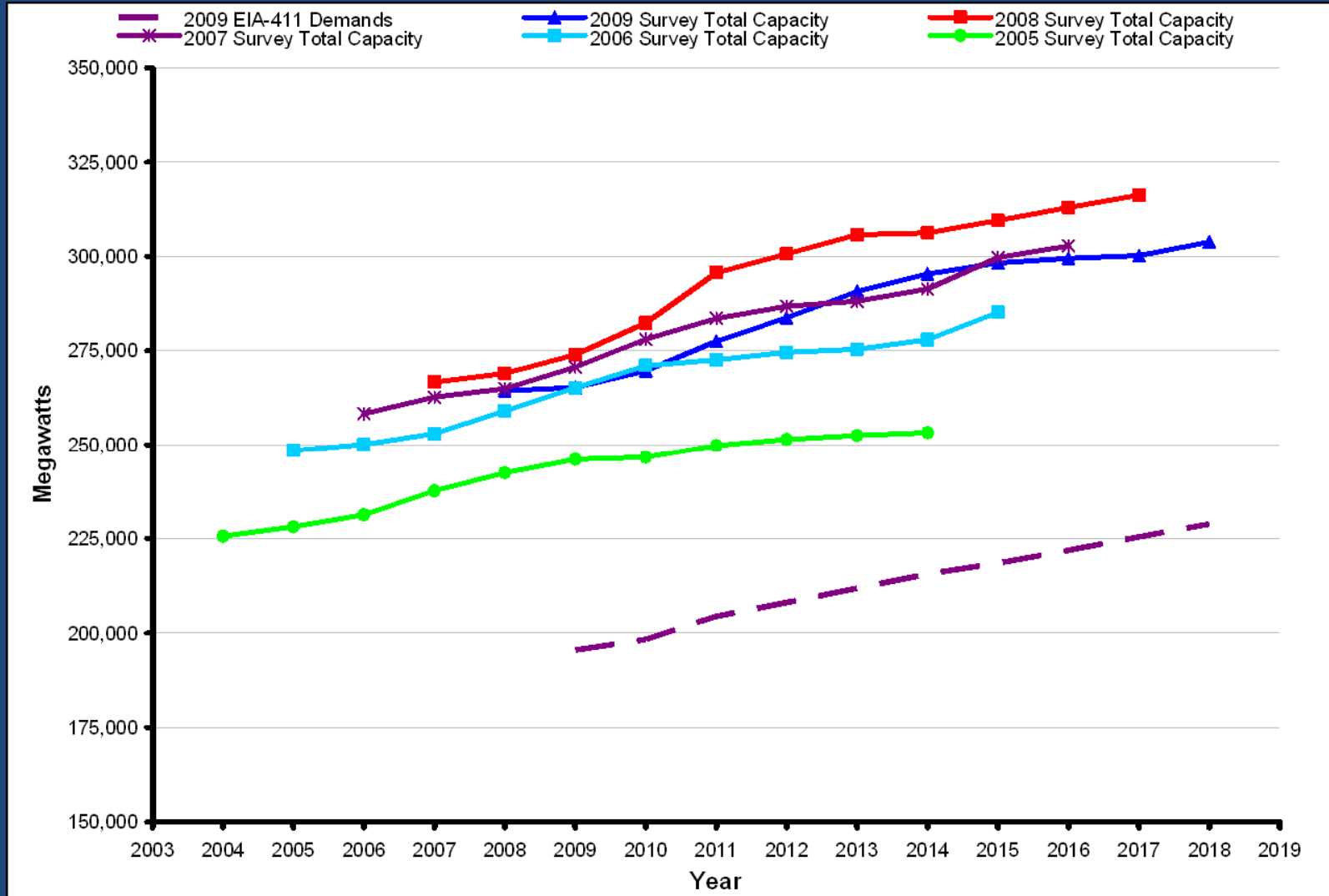


# VACAR Subregion

## VACAR Summer Peak Demand Historical Actual vs. 2009 Forecast

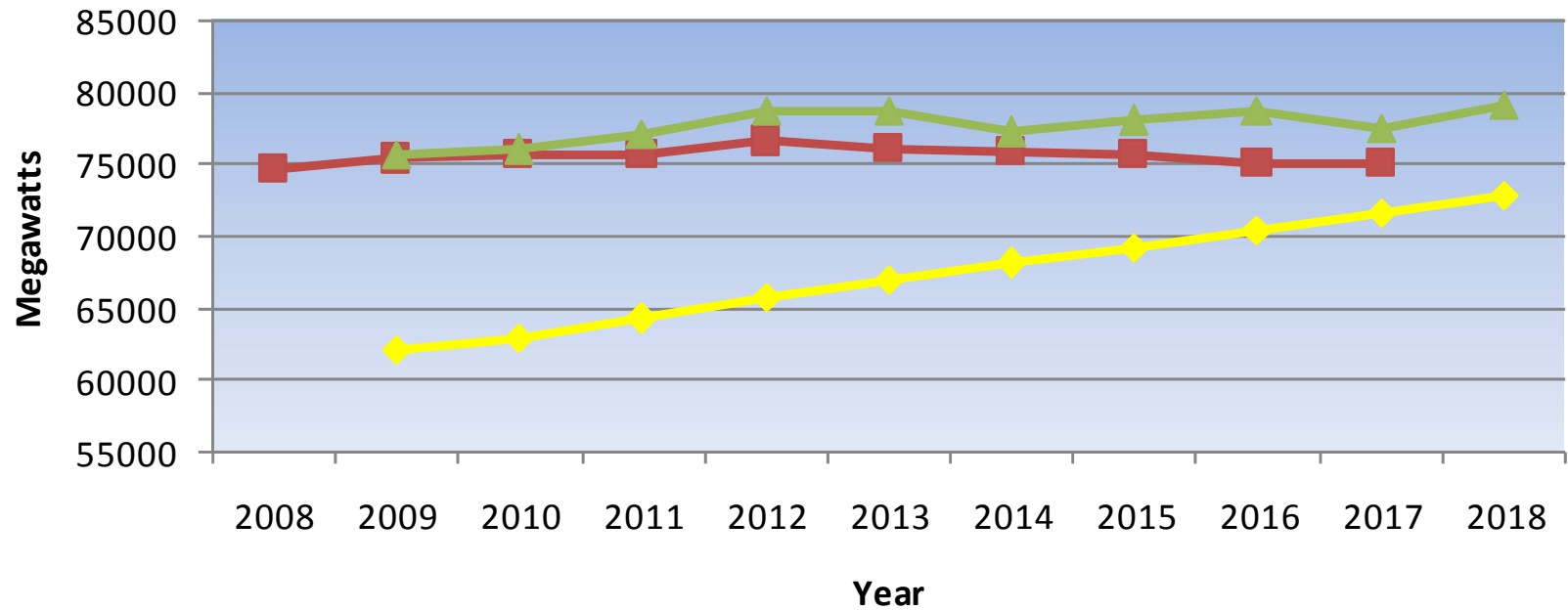


# SERC Region Total Capacity



# VACAR Sub-Region

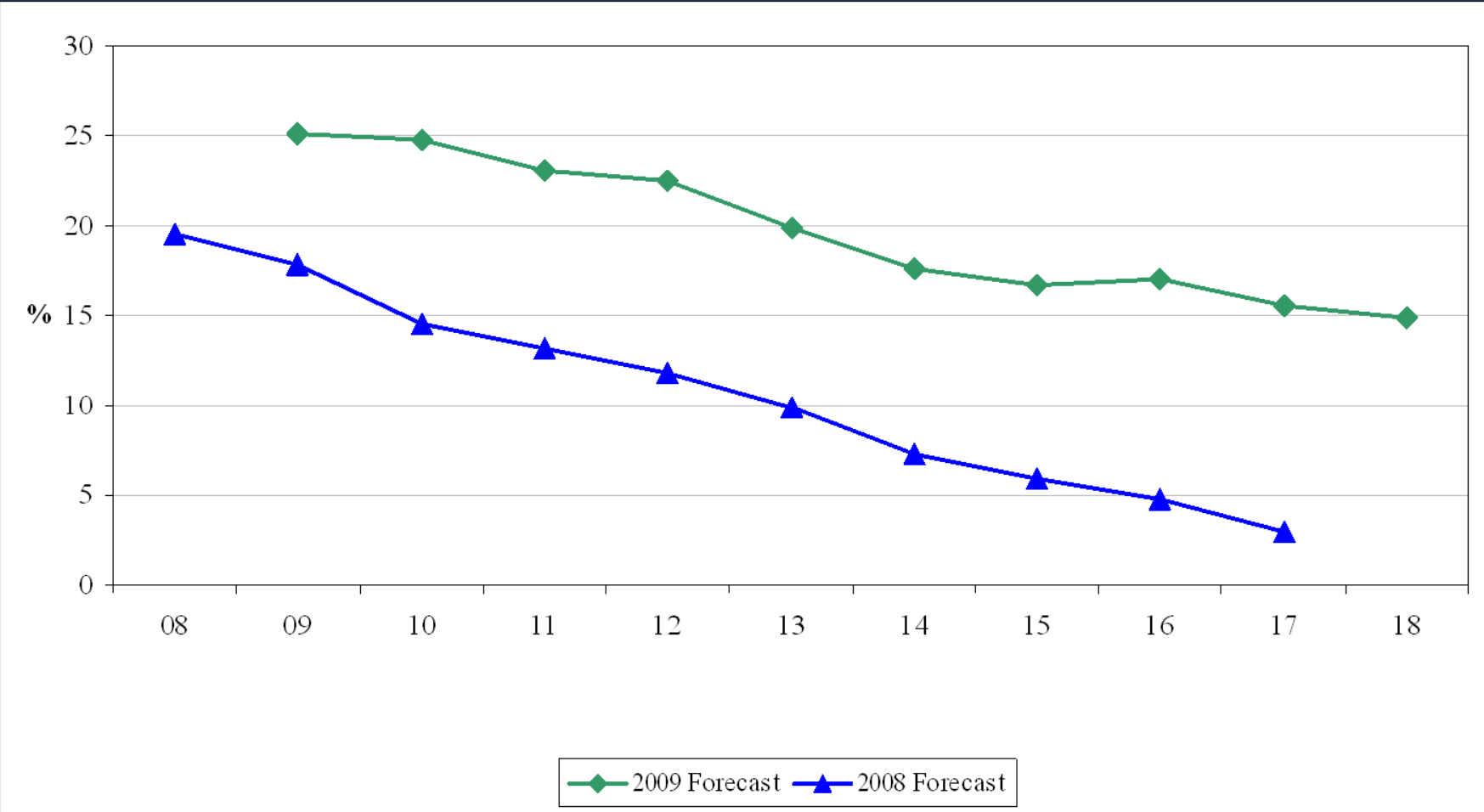
## Total Capacity



■ 2008 EIA-411 Total Capacity ▲ 2009 EIA-411 Total Capacity  
◆ 2009 EIA-411 Demands

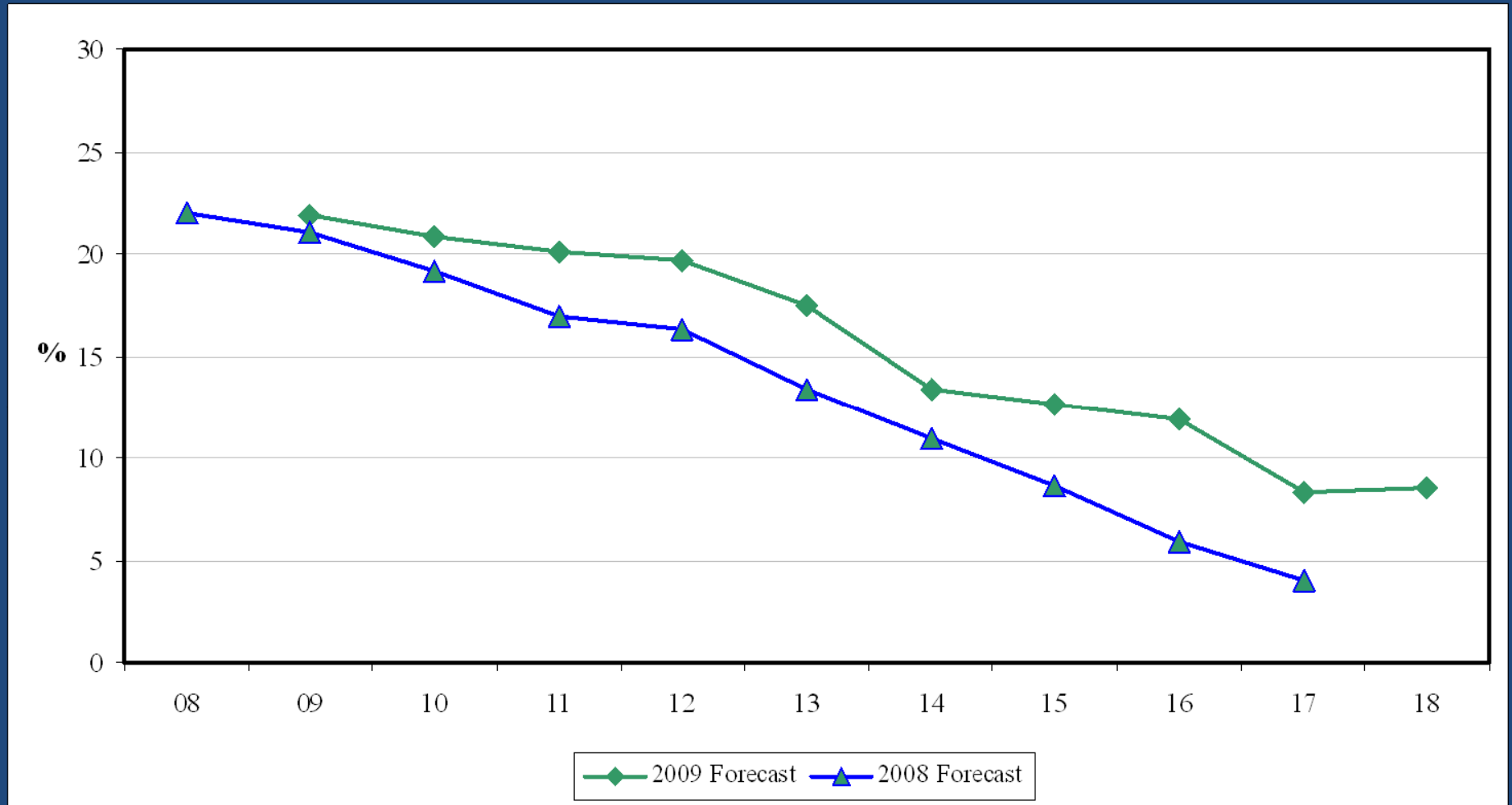
# SERC Region

## SERC Planned Capacity Resource Reserve Margin - Two-Year Trend



# VACAR Subregion

Planned Capacity Resource Reserve Margin – Two- Year Trend



# Generation Development Survey

Jim Peterson  
SCPSA

# Survey Request

- Eleventh annual survey
- Survey request sent in late January
- Information requested from SERC  
Transmission Providers
- Results received in March

# Survey Specifics

- 10 years of planned generation development
- Categorized by interconnection status
  - Interconnection Service requested (IS)
  - Interconnection Agreement signed (IA)
- Sub-categories indicated the amount designated as a network resource
- Aggregate generation plant capabilities, not plant specific
- Unit Retirements

# Survey Results - VACAR

Prior to December 31, 2009

Total Interconnected Generating Plant Capability in Commercial Operation: (Summer Net Plant Capability)	73,285 MW
Considered "Uncommitted" Generation:	2,799 MW (3.8%)

# Survey Results – VACAR

## In Service Year of Added Generation

Current Status of Generation Plant Development	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Interconnection Service Requested, Only	203	730	489	1,754	1,669	2,516	1,822	0	2,356	1,125
<i>DNR or Firm PTP</i>	203	700	130	1,040	715	2,516	1,700	0	2,234	1,125
Interconnection Agreement Signed/Filed	8	1,380	2,446	884	30	15	1,138	0	1,594	1,138
<i>DNR or Firm PTP</i>	8	1,380	1,978	661	30	15	1,138	0	1,594	1,138
Unit Retirements	0	0	95	1,073	59	47	0	79	0	0

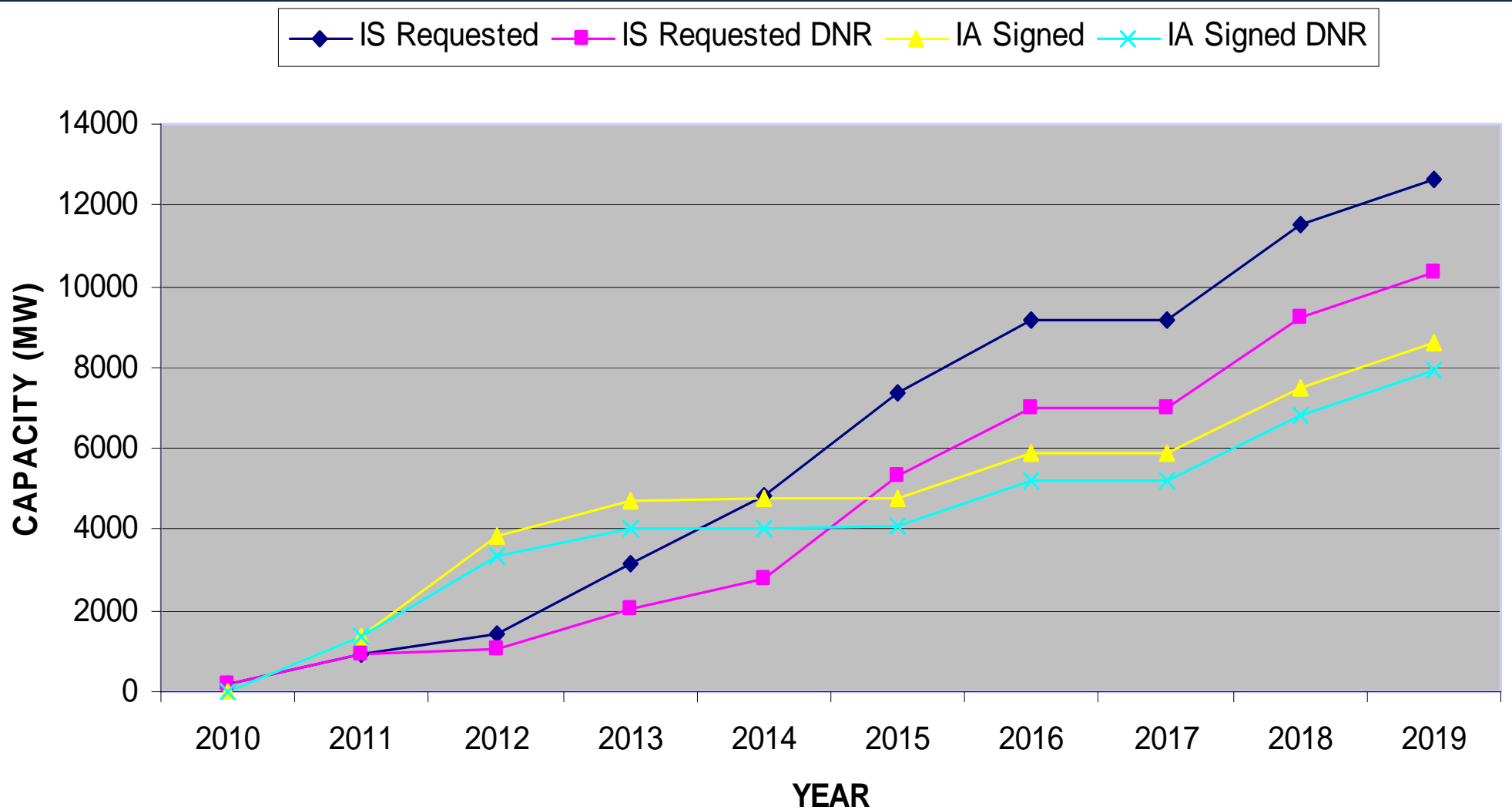
# Survey Results - VACAR

Total Interconnected Generating Plant Capability in  
Commercial Operation Prior to December 31, 2008: 73,285 MW  
(Summer Net Plant Capability)

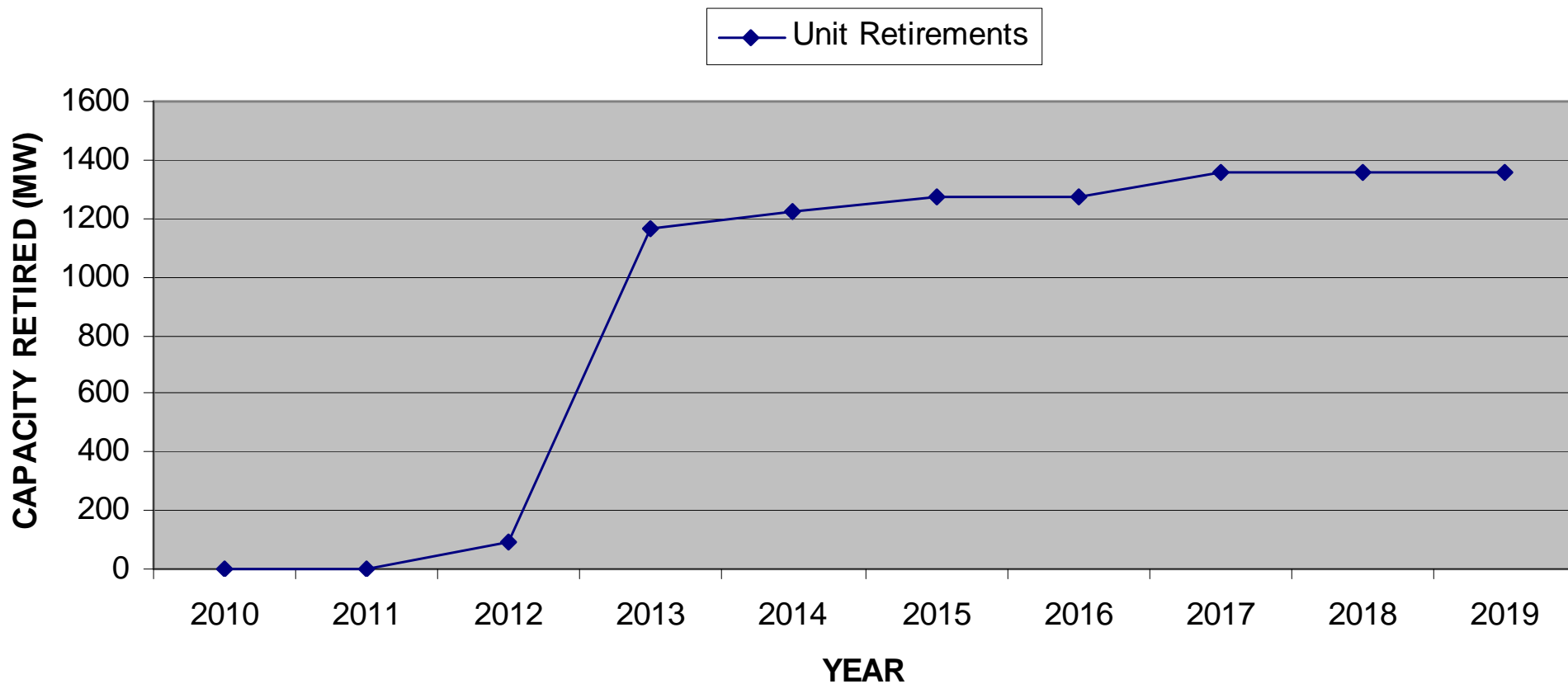
Total Projected Generating Plant Capability  
**Additions** by July 1, **2018**: 11,539 MW  
(Summer Net Plant Capability)

Total Projected Generating Plant Capability  
by July 1, **2018**: 84,824 MW  
(Summer Net Plant Capability)

# Cumulative Capacity Additions - VACAR

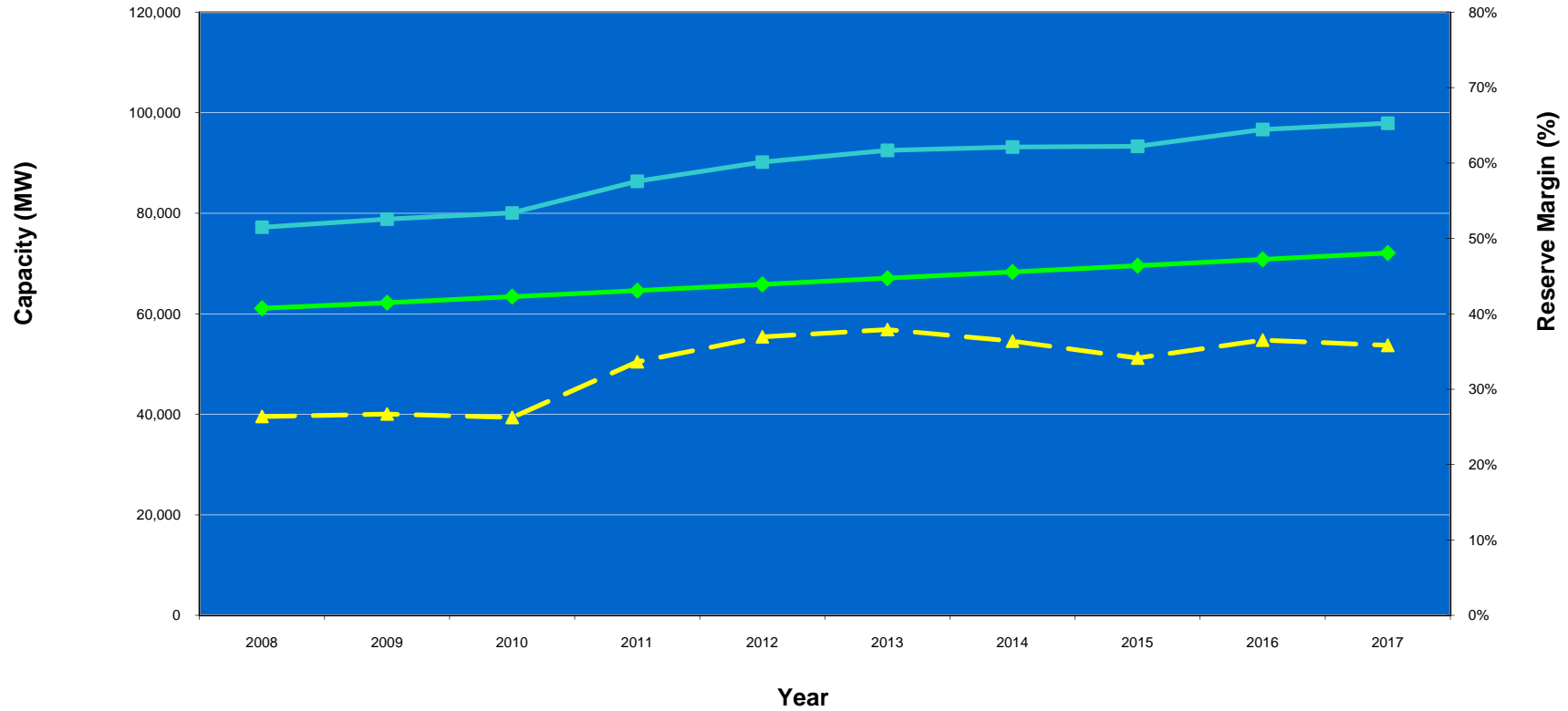


# Cumulative Unit Retirements - VACAR



# VACAR Reserve Margin

## VACAR Reserve Margin



—■— 2008 Survey Total VACAR Capacity

—◆— 2008 EIA-411 Demands

—▲— Gen Survey Reserve Margin

# Transmission Development Survey

Jim Peterson  
SCPSA

Mehdi Shakibafar  
Dominion Virginia Power

# Survey Specifics

- 5 years of planned transmission capital expenditures
- All line and substation projects where low-side voltage is 100 kV or greater
- Fully-loaded figures including any tax gross-up and overhead
- Expenditures for IPP, merchant, and other direct interconnect customers included regardless of eventual reimbursements

# Survey Results - VACAR

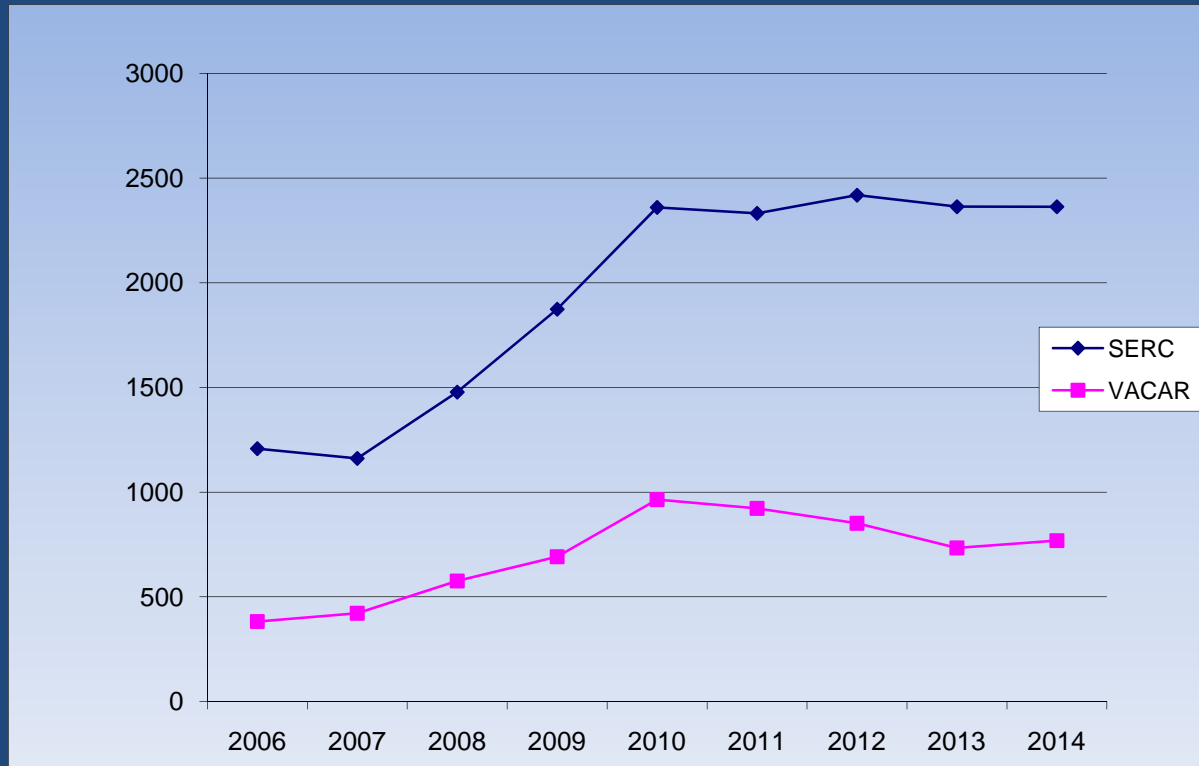
## Planned Transmission Expenditures (\$ in Millions)

	2010	2011	2012	2013	2014
Dominion	582	553	463	352	400
Duke Power	111	117	122	132	136
PEC	160	156	150	93	74
SCE&G	47	37	49	68	95
SCPSA	43	44	59	72	46
YADKIN	0	0	0	0	0
TOTAL	943	907	843	717	751

# VACAR vs. SERC

## Transmission Investment

	Forecast \$'s in millions								
	2006	2007	2008	2009	2010	2011	2012	2013	2014
SERC	1208	1161	1478	1874	2360	2332	2418.5	2363.46	2363.19
VACAR	382.1	421.4	575.8	691.42	964.44	922.53	851.47	733.7	768.5



2006 - 2009 \$ = Actual

# Survey Results - VACAR

## Planned Transmission Expenditures (\$ in Millions)

	2010	2011	2012	2013	2014
Transmission Associated with Generation	43	39	53	77	50
Transmission Associated with Optional upgrades for Generation & TSR		10	10	10	
Total Transmission	964	923	851	734	769
% Generation / TSR Related	4.5%	5.3%	7.4%	11.9%	6.5%

Questions?