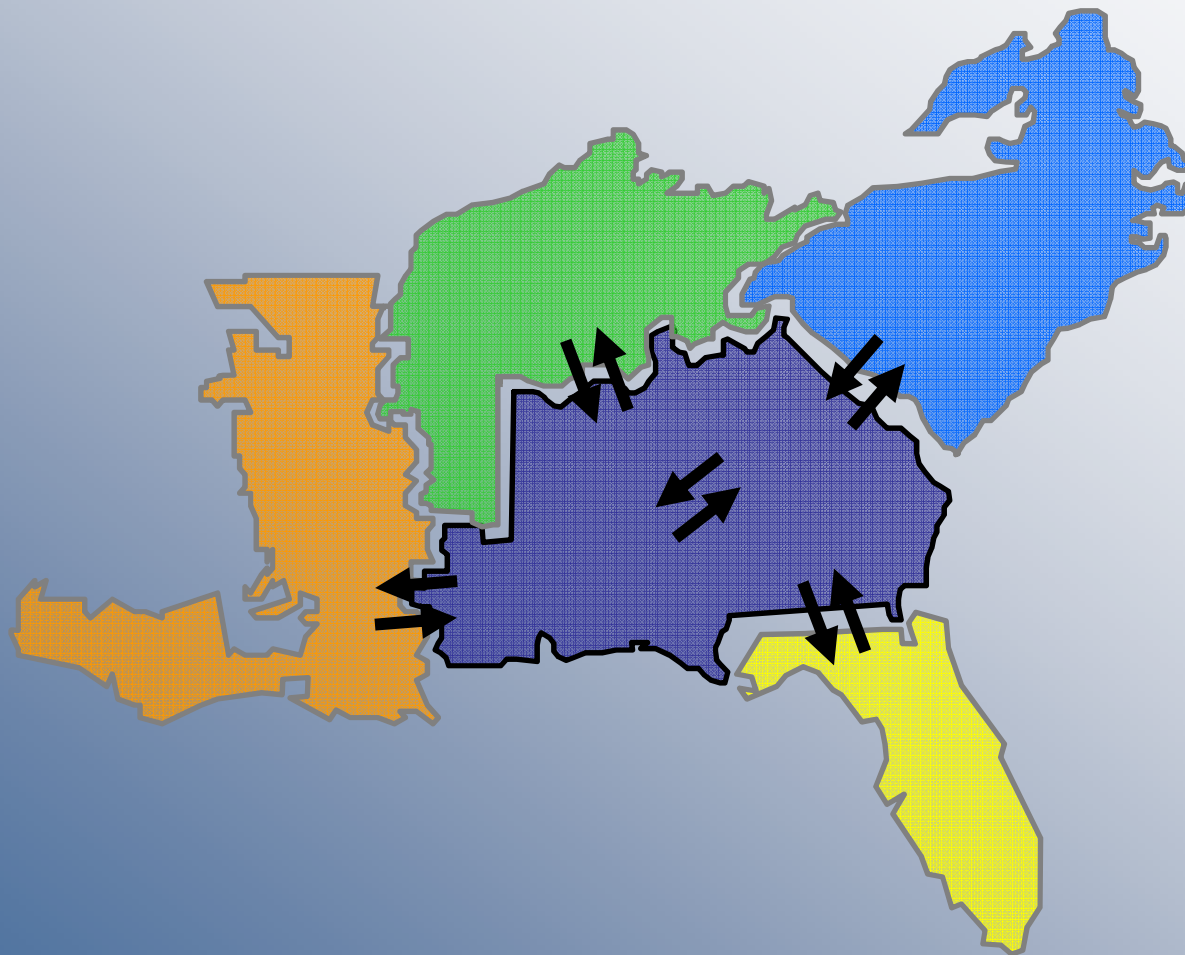


## 2<sup>ND</sup> QUARTER MEETING



## WELCOME

### 2011 PRELIMINARY EXPANSION PLAN MEETING

*10:00 AM – 3:00 PM EDT*

(Lunch served at approximately 11:30 PM)

- The SERTP process is a transmission planning process.
- Please contact the respective transmission provider for questions related to real-time operations or OATT transmission service.

## PURPOSES AND GOALS OF THE MEETING

- ❖ FRCC Update
- ❖ Ad Hoc Coordination Activities
- ❖ Modeling Assumptions
  - Load Forecast
  - Generation Assumptions
- ❖ Preliminary 10 year transmission expansion plan
  - Process Overview
  - East
  - West
- ❖ 2011 Economic Planning Studies Scope

# 2011 SERTP

## FRCC UPDATE

- Southern / FRCC Interface

- ❖ Total transfer capability study for subsequent year was being performed by Planners, but due to recent NERC MOD standards, that function has moved to the Operations Planning Group

- ❖ MOD – 001 – 1a

- R2: Each Transmission Service Provider shall calculate ATC or AFC values as listed below using the methodology or methodologies selected by its Transmission Operator(s):

- Hourly values for at least the next 48 hours
- Daily values for at least the next 31 calendar days
- Monthly values for at least the next 12 months (months 2 -13)

- ❖ OASIS postings are now derived from the above process

**AD HOC COORDINATION  
ACTIVITIES**

- Ad Hoc Coordination Activities

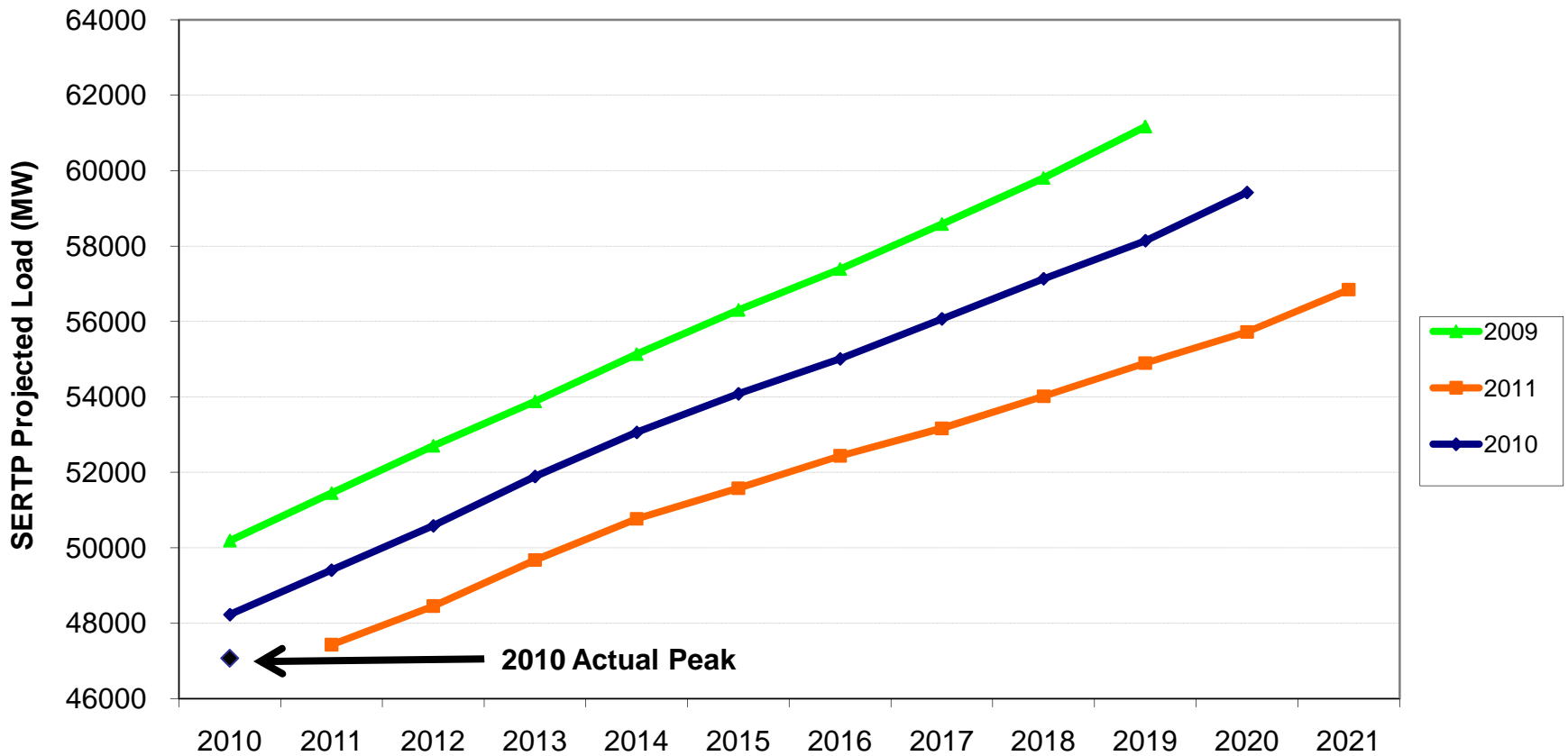
- ❖ SERC LTSG 2016 Summer Study

- Purpose: Assist in assessing the simultaneous feasibility of the expansion plans within SERC.
- McIntosh – Jasper Tap 115 kV T.L. (Southern – SCEG tie-line) was identified as a facility with decreasing incremental transfer capability from Southern to SCEG/SCPSA
  - SCEG, SCPSA, and Southern developed coordinated Summer Peak models for years 2016 – 2020 that include:
    - » All obligations (including partial paths)
    - » The latest generation and transmission expansion plans
  - Currently, performing screens on the coordinated models.

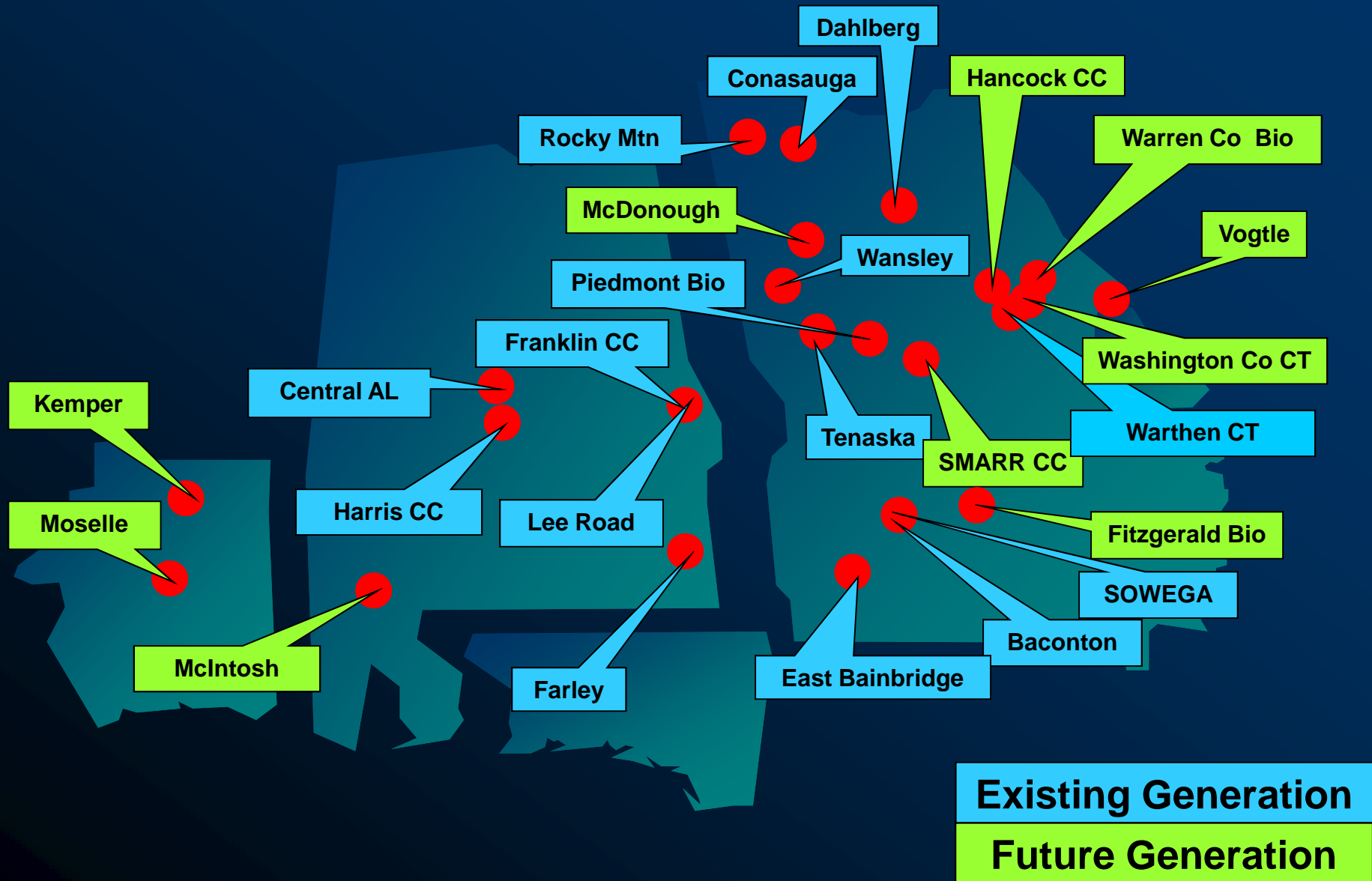
## MODELING ASSUMPTIONS

# 2011 LOAD FORECAST

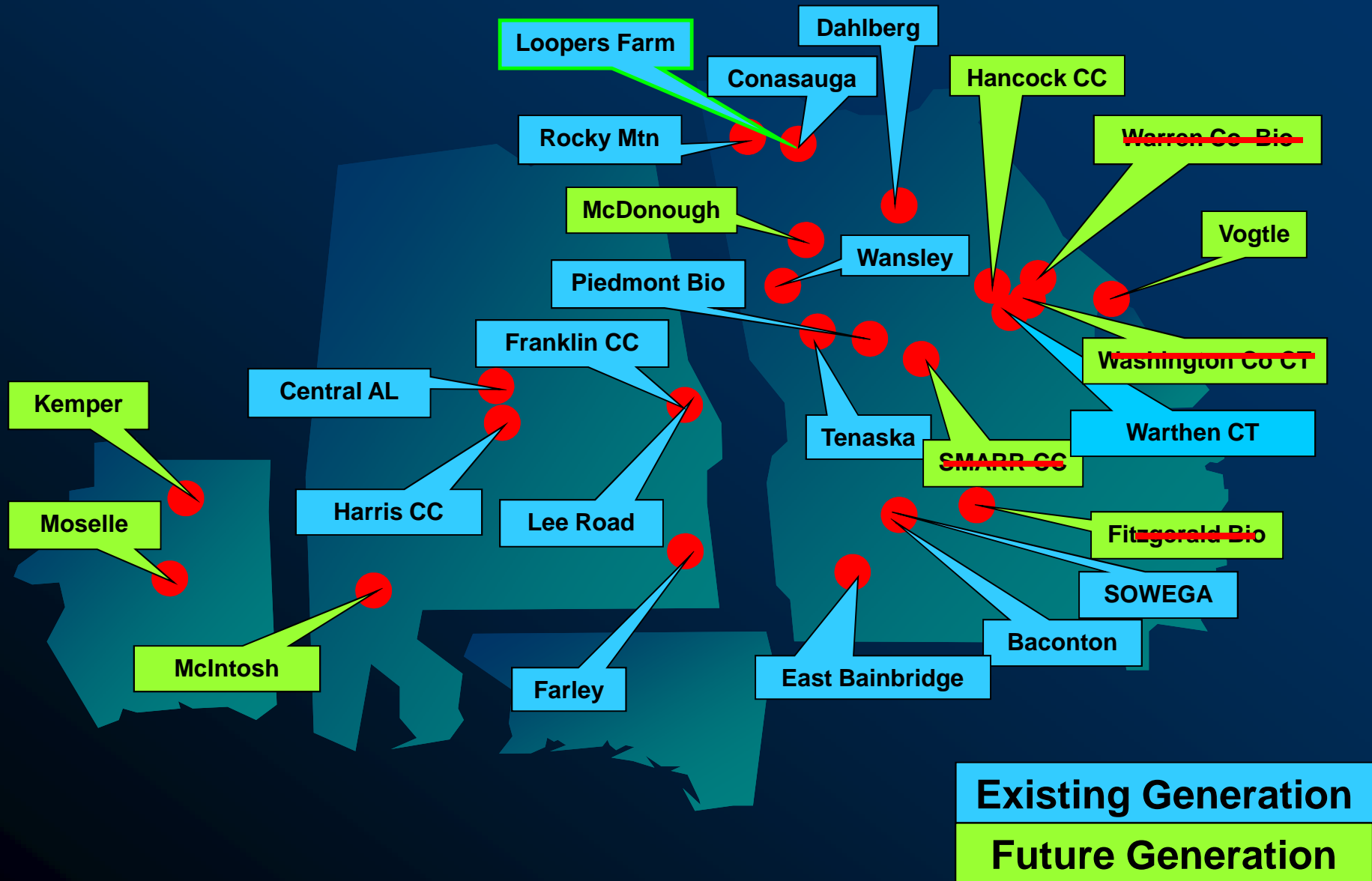
SERTP Sponsor Load Forecast  
2009, 2010, and 2011 Series Base Cases  
(Southern + GTC + MEAG + PowerSouth + SMEPA)



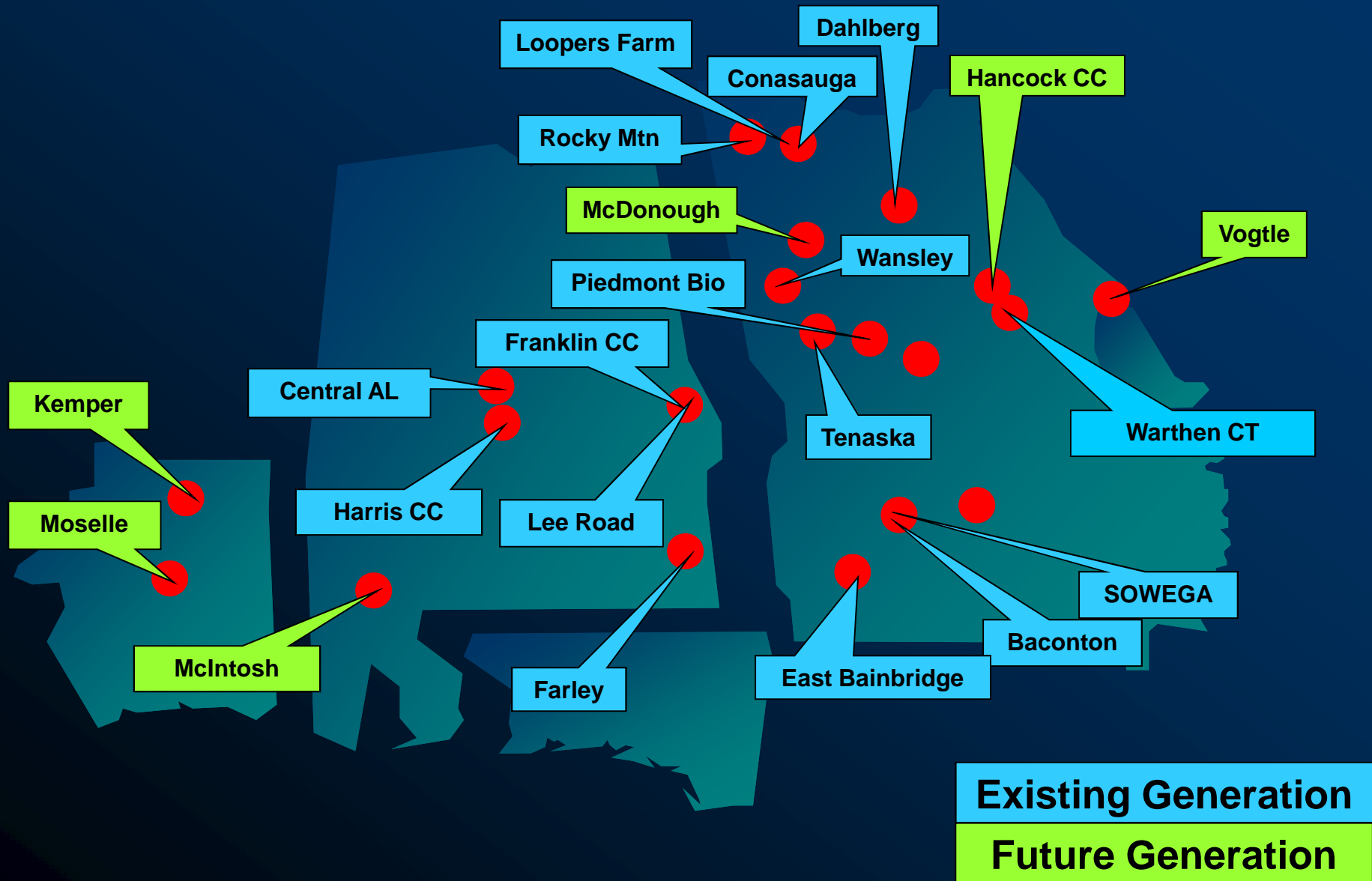
# 2011 REGIONAL GENERATION ASSUMPTIONS



# 2011 REGIONAL GENERATION ASSUMPTIONS



# 2011 REGIONAL GENERATION ASSUMPTIONS



# 2011 SERTP

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

Year		Site	MW
2011	GTC	Dahlberg CT	-100
		Dynergy Heard CTs	-100
		East Bainbridge	-72
		Loopers Farm	146
		Franklin 3	-280
		McDonough 2 Coal	-51
		Rocky Mountain	44
		Wansley CC7	-152
		Warthen CT	600
	MEAG	Crisp Co Hydro	-20
		Calhoun Cogen	-20
	PS	McIntosh 4 & 5	448
	SoCo	Farley 1 Uprate	35
		Franklin 2	-625
McDonough 2 Coal		-200	

Year		Site	MW
2012	GTC	<del>Fitzgerald Bio</del>	55
		McDonough 1 Coal	-49
		Conasauga	620
		Loopers Farm	206
		Wansley CC7	152
		SMEPA	Moselle
	SoCo	Conasauga	-620
		Farley 2 Uprate	35
		McDonough 1 Coal	-202
		McDonough CC4	841
		McDonough CC5	841
		Piedmont Bio	50

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

Year		Site	MW
2013	GTC	East Bainbridge	78
		Lee Road CT	100
		Loopers Farm	268
		Franklin 2	625
	MEAG	Vogtle 1	44
	SoCo	Central Alabama CC	885
		McDonough CC6	841
Vogtle 1		-44	

Year		Site	MW
2014	GTC	Dahlberg CT	75
		SOWEGA	90
		<del>Warren Co Bio</del>	<del>400</del>
	SoCo	Baconton CT	-197
		Dahlberg CT	-292
		Kemper IGCC	600

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

Year		Site	MW
2015	GTC	Dahlberg CT	187
		Franklin 3	280
		Santa Rosa	-225
		SOWEGA	-90
		<del>SMARR GG</del>	<del>665</del>
		<del>Washington Co CT</del>	<del>734</del>

Year		Site	MW	
2015 (cont.)	GTC	Branch	-45	
		Gaston 1&2	-52	
		Hammond 2	-11	
		McManus CT	-17	
		Mitchell	-25	
		Scherer 3	-62	
		Wilson 5 CT	-21	
		Yates	-122	
		MEAG	Vogle 2	44
		SoCo	Vogle 2	-44

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

Year	Site	MW
2016	Dalton Vogtle 3	16
	GTC Dahlberg CT	113
	Vogtle 3	330
	Warthen CT	-280
	MEAG Vogtle 3	250
	SoCo Vogtle 3	504

Year	Site	MW
2017	Dalton Vogtle 4	16
	GTC Vogtle 4	330
	Wansley CC6	561
	MEAG Vogtle 4	250
	SoCo Vogtle 4	504
	Wansley CC6	-561

# 2011 SERTP

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

Year	Site	MW
2018	N/A	

Year	Site	MW
2019	PS McIntosh 6	187
	SoCo Harris 2	-628

Year	Site	MW
2020	N/A	

Year	Site	MW
2021	SoCo Hancock CC1	940

## Generation Assumptions for the 2011 Transmission Expansion Planning Process

### PTPs preserved through the planning horizon

Starting in Year	Site	MW
2012	PTP Dahlberg	255
2012	Franklin	535
2012	Harris 1	584
2012	Hillabee	700
2012	Lindsay Hill	500
2012	Scherer 3	235
2012	Scherer 4	850
2015	Vogle	103
2016	Vogle	103

### PTPs ending within the planning horizon

Year	Site	MW
2012 – 2014	PTP Scherer 3	42
2012 – 2014	Miller	164
2015**	Miller	103

**\*\*Point to Point is assumed for the stated year only**

**PRELIMINARY TEN YEAR  
EXPANSION PLAN**

# 10 YEAR EXPANSION PLAN

## APPROXIMATE TIME LINE FOR AREA PLANNING (YEARS 1 – 5)

Base cases updated  
with most recent  
input assumptions.

Assess need for  
additional new projects.

Approximate target for  
completion of year 1 – 5  
evaluation.

Discuss the preliminary  
expansion plan with the  
SERTP Stakeholders and  
obtain input.

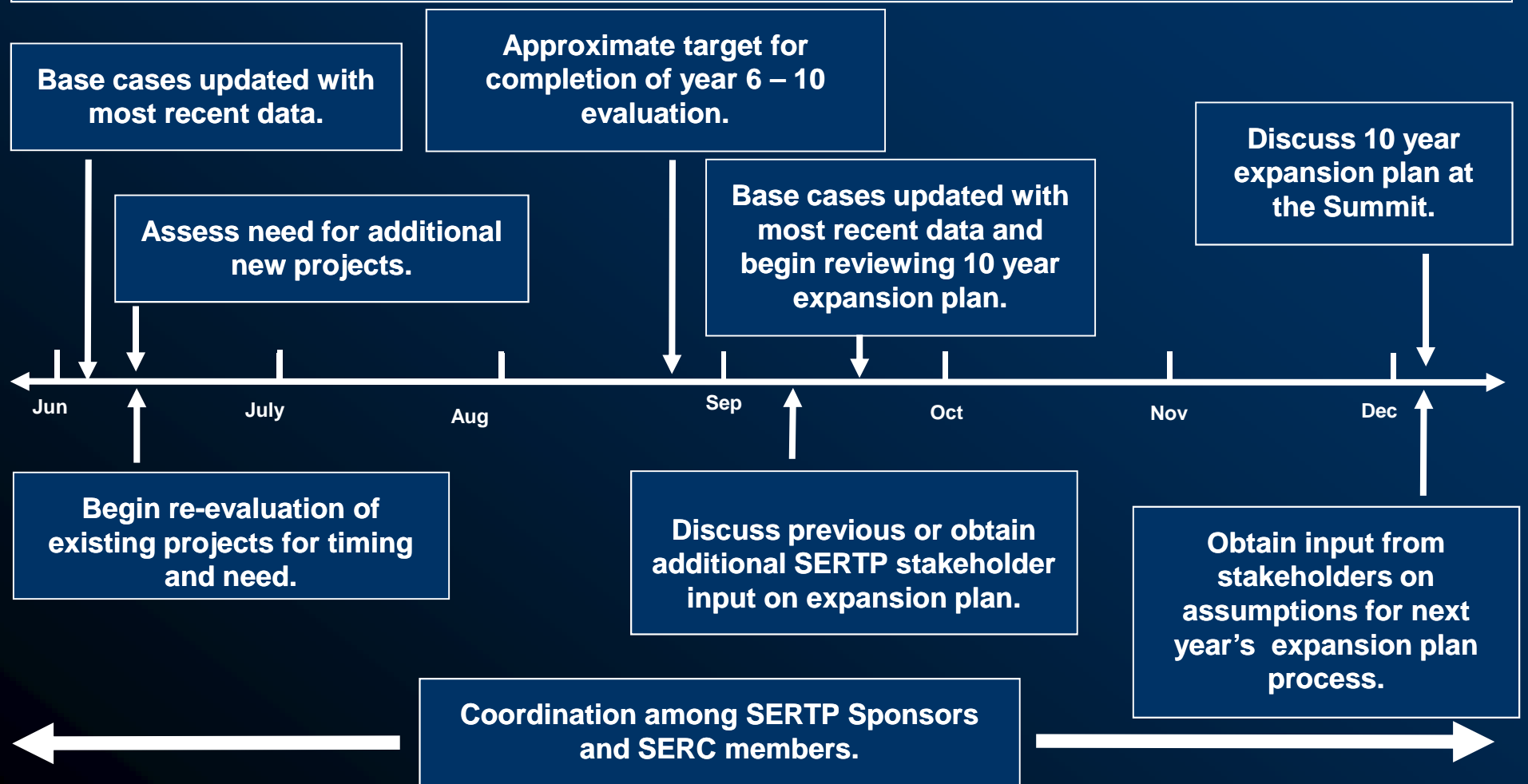


Begin re-evaluation of  
existing projects for timing  
and need.

Coordination among SERTP Sponsors and  
SERC members.

# 10 YEAR EXPANSION PLAN

## APPROXIMATE TIME LINE FOR AREA PLANNING (YEARS 6 – 10)



# 2011 SERTP

- ❖ The projects described in this presentation represent the preliminary ten (10) year expansion plan. The expansion plan is periodically reviewed and may be revised due to changes in assumptions.
- ❖ This presentation does not represent a commitment to build for projects listed in the future.

# 2011 SERTP

- ❖ The in-service date of each project is June 1<sup>st</sup> of the stated project year, unless otherwise specified.
- ❖ The need date of each project is the same as the in-service date, unless otherwise specified.

# 2011 SERTP

**EAST**

**WEST**

## 2011 ECONOMIC PLANNING STUDIES SCOPE

# 2011 SERTP

## ECONOMIC PLANNING STUDIES

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- ❖ TVA Border to Southern Balancing Authority
    - 3500 MW
    - Additional sensitivity at 80% of Summer Peak Load

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  - ❖ EES Border to Southern Balancing Authority
    - 1500 MW
    - Additional sensitivity at 80% of Summer Peak Load

---

  - ❖ SC Border to Southern Balancing Authority
    - 1000 MW
-

## POWER FLOW CASES UTILIZED

- ❖ Load Flow Cases:
  - 2011 Series Version 2A
  - Summer Peak
- ❖ Study Year: 2016

## ECONOMIC PLANNING STUDIES

### ❖ Analyses to be performed:

- Thermal Analysis
  - DC contingency analysis to attain monitored/contingency pairs with Siemens PSS MUST
  - AC verified with Siemens PTI PSS/E
- Interface Transfer Capability Impacts
- Stability Impacts
- Potential Solutions
  - Transmission Projects and Cost Estimates

## TVA Border to SBA

- **Transfer Amount:** 3500 MW
- **Year:** 2016
- **Transfer Type:** Generation to Generation
- **Source:**
  - New generator interconnecting to the Shelby 500 kV substation in TVA near Memphis, TN
- **Sink:**
  - Generation within the SBA
- **Additional Analysis:**
  - Provide an additional screen at 80% of summer peak load

## TVA Border to SBA

- **System Improvements to be added to the TVA model:**
  - ❖ Per Stakeholder Request

1	Construct a new, parallel 500 kV T.L. from Shelby to Cordova
2	Construct a new 500 kV T.L. from Johnsonville to Maury
3	Construct a new 500 kV T.L. from Jackson to Lagoon Creek.
4	Uprate the Pleasant Hill – Benton 500 kV T.L.
5	Uprate the Pleasant Hill – Union 500 kV T.L.
6	Uprate the Shelby – Cordova 500 kV T.L. #1
7	Uprate the Jackson – Haywood 500 kV T.L.

## EES Border to SBA

- **Transfer Amount:** 1500 MW
- **Year:** 2016
- **Transfer Type:** Generation to Generation
- **Source:**  
New generator interconnecting to the El Dorado 500 kV substation in EES near El Dorado, AR
- **Sink:**  
Generation within the SBA
- **Additional Analysis:**  
Provide an additional screen at 80% of summer peak load

## SCPSA Border to SBA

- **Transfer Amount:** 1000 MW
- **Year:** 2016
- **Transfer Type:** Load to Generation
- **Source:** Uniform load scale of the SCPSA area
- **Sink:** Generation within the SBA

## NEXT MEETING ACTIVITIES

### ❖ Second RPSG Meeting

- Location: TBD
- Date: September 2011
- Purpose:
  - Discuss Preliminary Economic Planning Results

# 2011 SERTP

QUESTIONS?