

2010 SERTP

2ND QUARTER MEETING



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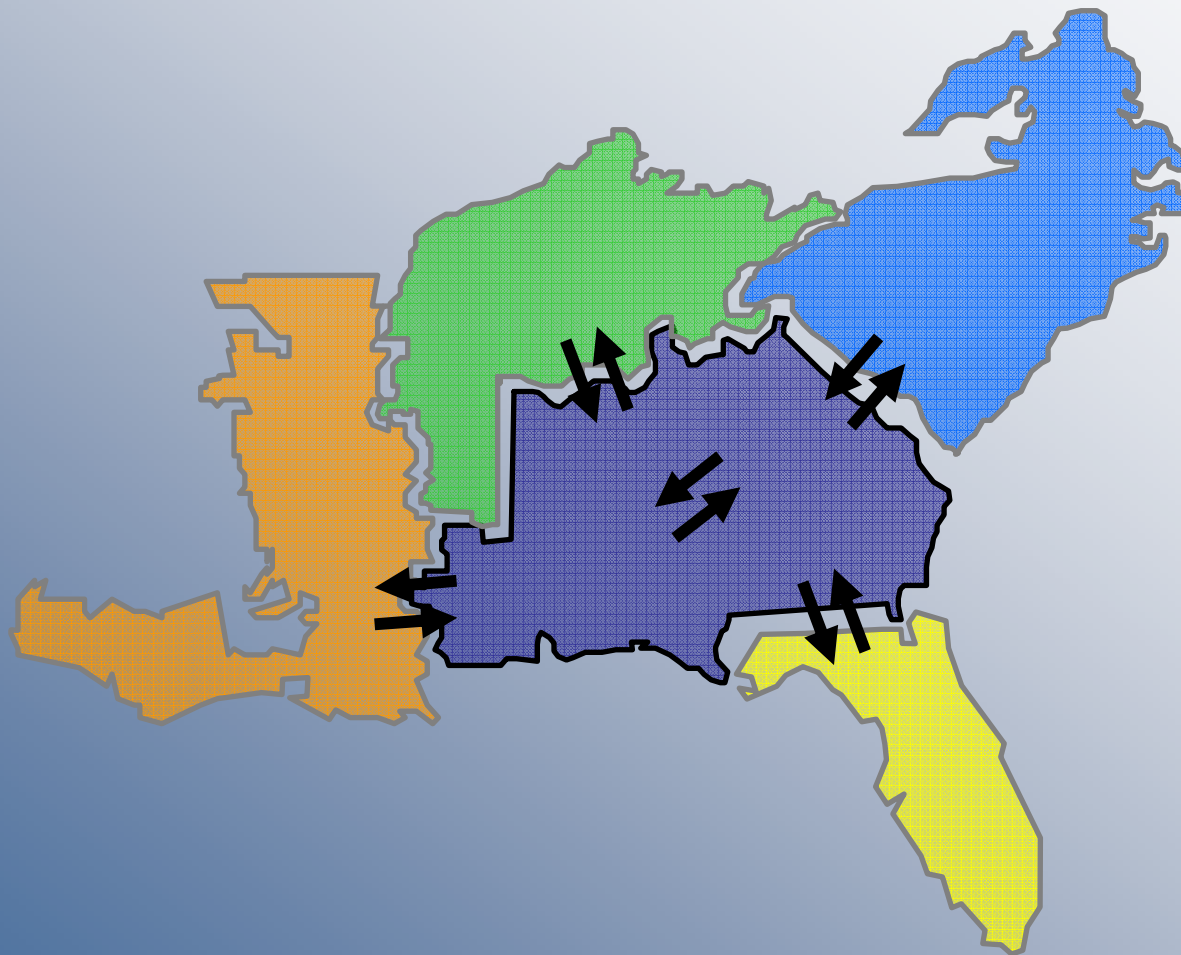
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WELCOME

**SERTP 2010 – PRELIMINARY
EXPANSION PLAN MEETING**

10:00 AM – 3:00 PM EDT

(Lunch served at approximately 12:00 PM)

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PURPOSES AND GOALS OF THE MEETING

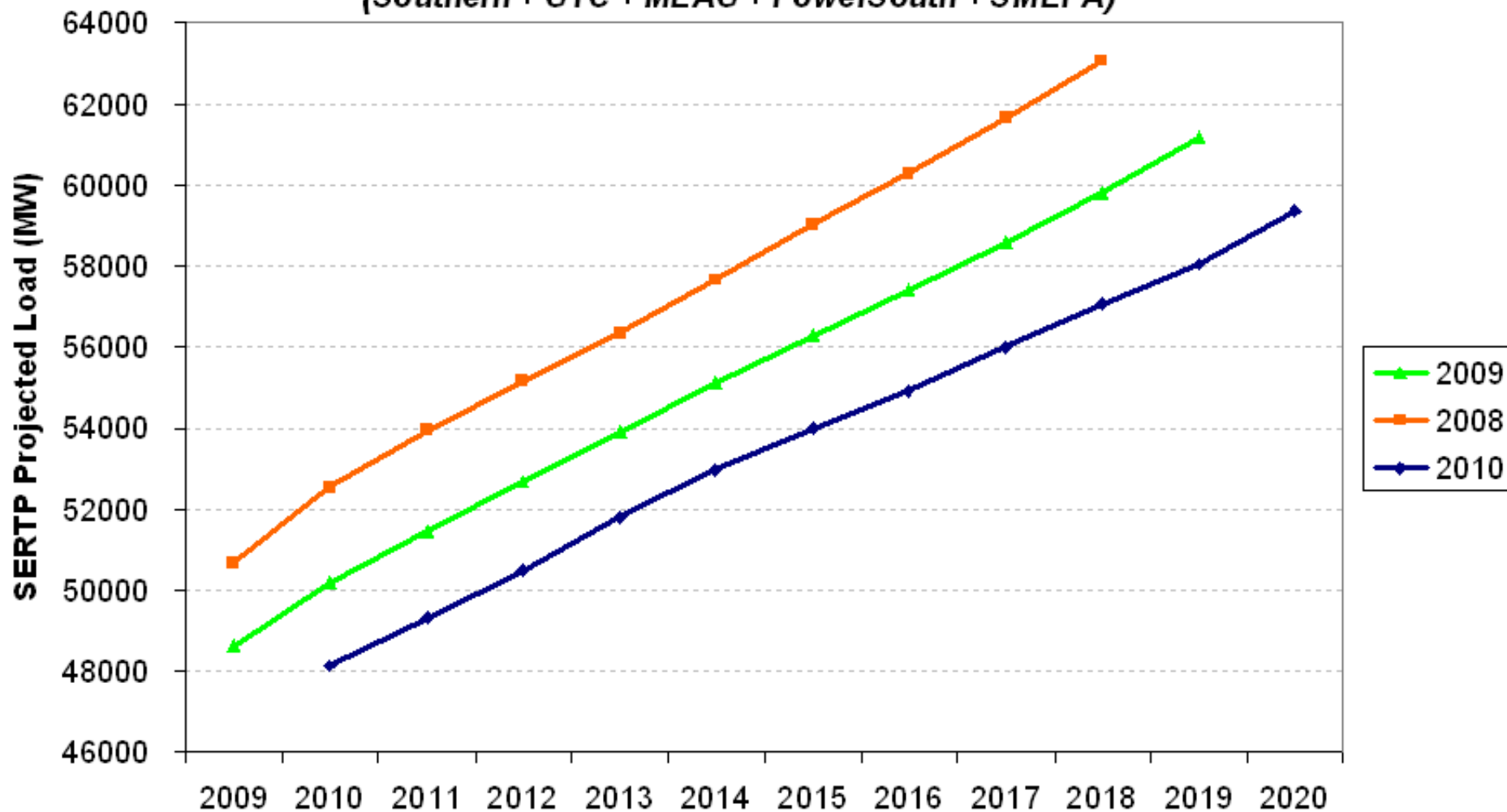
- ❖ Modeling Assumptions
 - Load Forecast
 - Generation Assumptions
- ❖ FRCC Update
- ❖ Preliminary 10 year transmission expansion plan
 - Process Overview
 - East Region
 - West Region
- ❖ 2010 Economic Planning Studies Scope



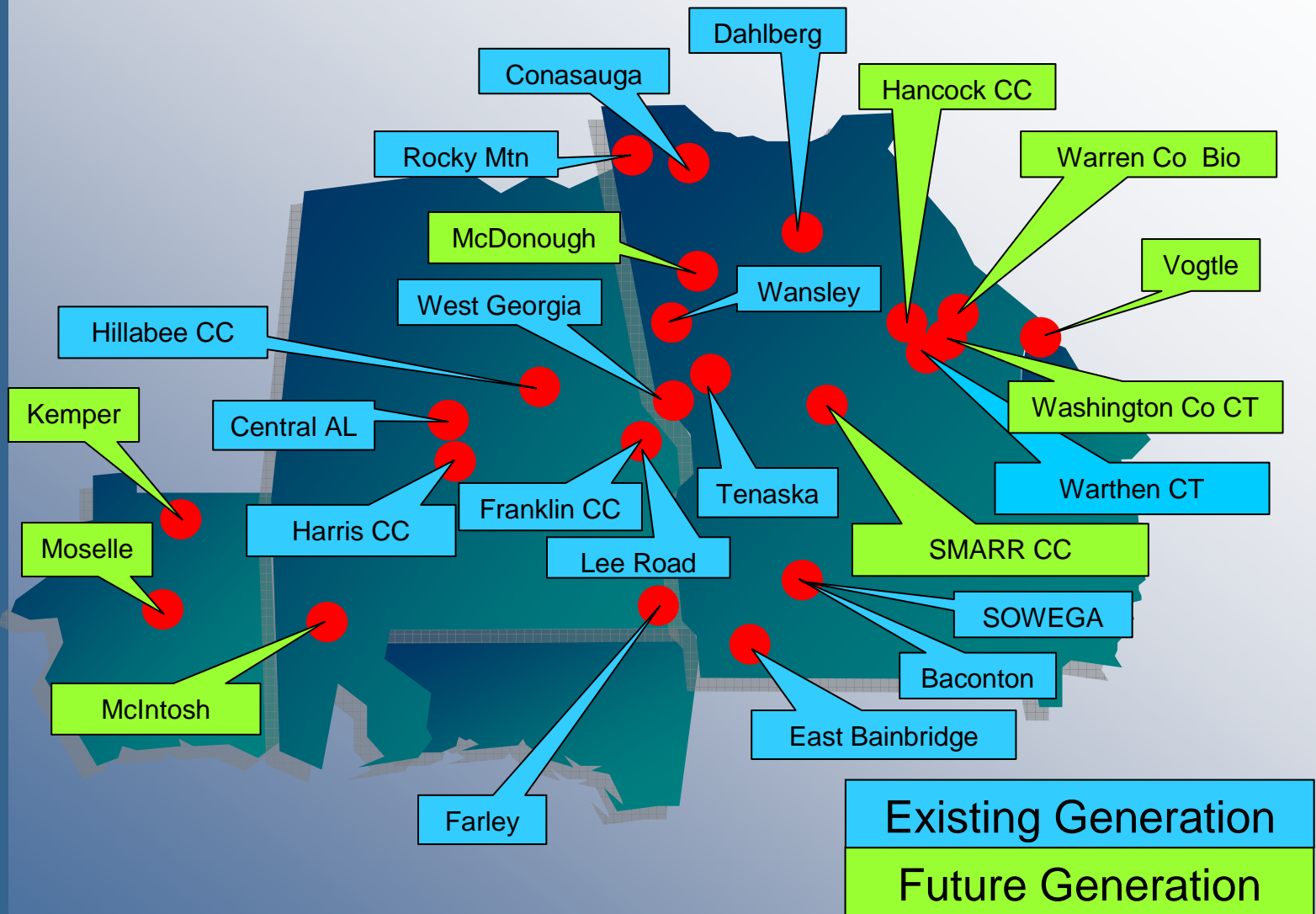
MODELING ASSUMPTIONS

2010 LOAD FORECAST

SERTP Sponsor Load Forecast
2008, 2009, and 2010 Series Base Cases
(Southern + GTC + MEAG + PowerSouth + SMEPA)



2010 REGIONAL GENERATION ASSUMPTIONS



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Preliminary Generation Assumptions for the 2010 Transmission Expansion Planning Process



Year	Site	MW
2010	Dahlberg CT (GTC)	-160
	West Ga. Gen (GTC)	150
	Rocky Mountain (GTC)	45
	Warthen CT (GTC)	-600
	Lee Road CT (GTC)	-100
	Wansley 7 CC (GTC)	572
	Hillabee CC (GTC)	350
	Wansley 7 CC (SoCo)	-572
	Franklin 1 (SoCo)	-559
	Franklin 1 (PTP)	535
	Harris 1 (SoCo)	-627
	Harris 1 (PTP)	584
	Dahlberg CT (SoCo)	292
	Tenaska, Heard Co (SoCo)	942

Year	Site	MW
2011	Dahlberg CT (GTC)	-100
	Franklin 2 (SoCo)	-625
	Franklin 2 (GTC)	625
	Warthen CT (GTC)	390
	Farley 1 Uprate (SoCo)	35
	Lindsay Hill CC (GTC)	205
	Rocky Mountain (GTC)	44
	East Bainbridge (GTC)	-72
	McIntosh 4 & 5 (PS)	448

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Preliminary Generation Assumptions for the 2010 Transmission Expansion Planning Process



Year	Site	MW
2012	Farley 2 Uprate (SoCo)	35
	Fitzgerald Bio (MEAG)	55
	McDonough 2 Coal (GTC)	-49
	McDonough 2 Coal (SoCo)	-201
	McDonough 1 Coal (GTC)	-51
	McDonough 1 Coal (SoCo)	-200
	McDonough CC4 (SoCo)	841
	McDonough CC5 (SoCo)	841
	Conasauga (SoCo)	-620
	Piedmont Bio (SoCo)	50
	Moselle (SMEPA)	150

Year	Site	MW
2013	McDonough CC6 (SoCo)	841
	Central Alabama CC (SoCo)	885
2014	Baconton CT (SoCo)	-197
	Dahlberg CT (SoCo)	-292
	Kemper (SoCo)	600
	Washington Co CT (GTC)	550
	Warren Co Bio (GTC)	100

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Preliminary Generation Assumptions for the 2010 Transmission Expansion Planning Process



Year	Site	MW
2015	SMARR CC (GTC)	580
	Dahlberg CT (GTC)	300
2016	Vogtle 3 (GTC)	330
	Vogtle 3 (MEAG)	250
	Vogtle 3 (Dalton)	16
	Vogtle 3 (SoCo)	504
	Dahlberg CT (GTC)	-300
	Warthen CT (GTC)	-390

Year	Site	MW
2017	Vogtle 4 (GTC)	330
	Vogtle 4 (SoCo)	504
	Vogtle 4 (MEAG)	250
	Vogtle 4 (Dalton)	16
	Wansley 6 CC (SoCo)	-561
	Wansley 6 CC (GTC)	561

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Preliminary Generation Assumptions for the 2010 Transmission Expansion Planning Process



Year	Site	MW
2018	N/A	
2019	Hancock CC1 (SoCo)	840
	East Bainbridge (GTC)	72
	SOWEGA (GTC)	45
	Lee Road CT (GTC)	50
2020	Harris 2 (SoCo)	-628
	McIntosh 6 (PS)	187
	Hancock CC2 (SoCo)	840
	SOWEGA (GTC)	-45
	Lee Road CT (GTC)	-50
	SMARR CC (GTC)	580

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FRCC UPDATE



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- Southern / FRCC Interface
 - ❖ Total Transfer Capability Study
 - Evaluates 2011 TTC for use in OASIS postings utilized in the operating horizon
 - Southern has provided updated models of the Southern Area
 - FRCC is working on its updated Florida models



PRELIMINARY TEN YEAR TRANSMISSION EXPANSION PLAN

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- ❖ 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.

10 YEAR EXPANSION PLAN

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

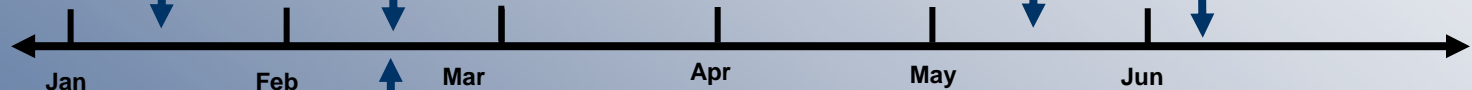


Base cases updated with most recent input assumptions.

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.

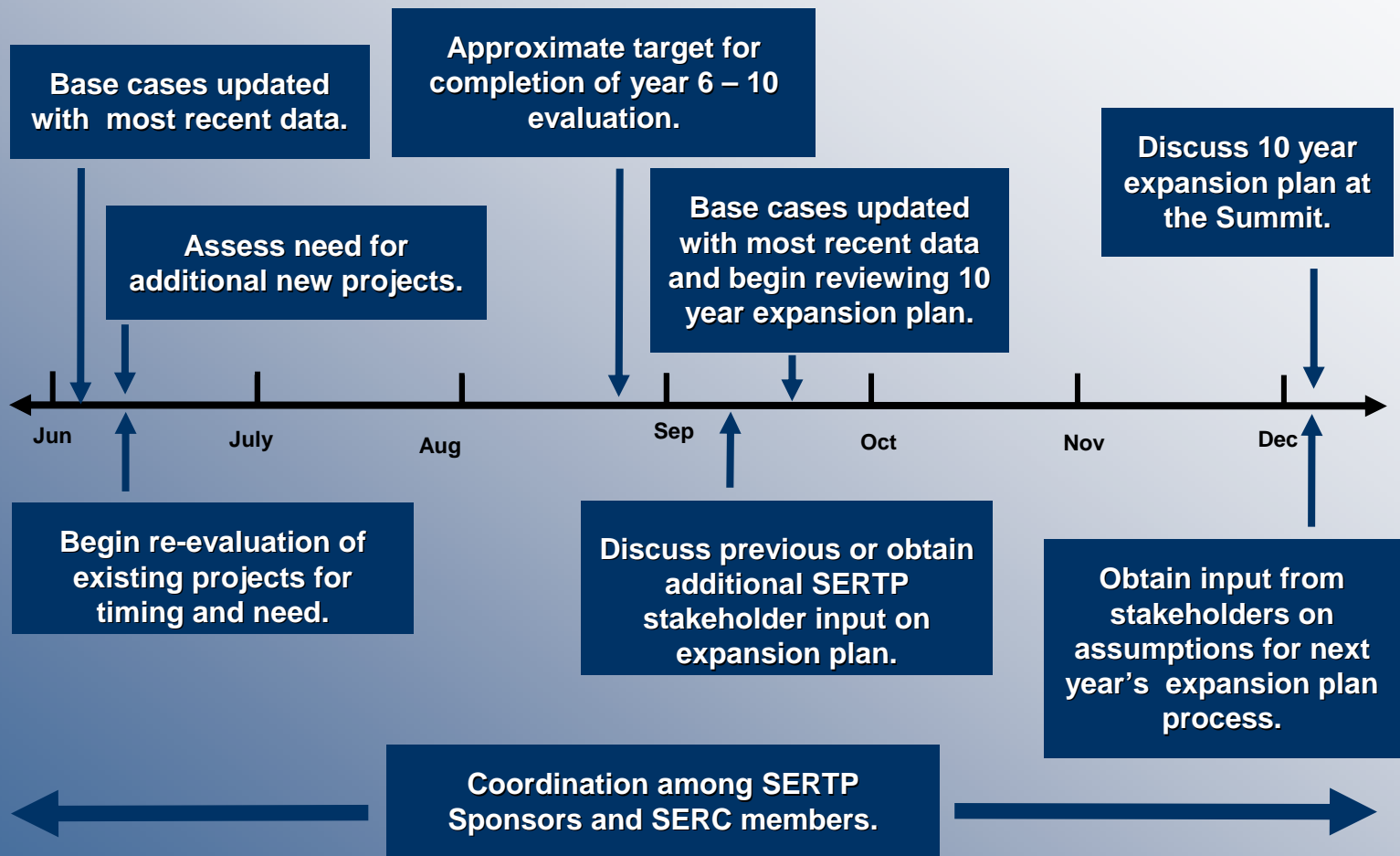


Begin re-evaluation of existing projects for timing and need.

Coordination among SERTP Sponsors and SERC members.

10 YEAR EXPANSION PLAN

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



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EAST REGION
WEST REGION

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2010 ECONOMIC PLANNING STUDIES SCOPE

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FIVE ECONOMIC PLANNING STUDIES

- ❖ Birmingham, AL to Georgia ITS
 - 1000 MW
- ❖ Duke Border to Southern Balancing Authority
 - 2000 MW
- ❖ SC Border to Southern Balancing Authority
 - 200 MW
- ❖ TVA Border to Southern Balancing Authority
 - 1500 MW
- ❖ North Georgia to Mississippi
 - 600 MW

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POWER FLOW CASES UTILIZED

- ❖ Load Flow Cases:
 - 2010 Series Version 2A
 - Summer Peak
- ❖ Study Year: 2016

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FIVE 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



Birmingham, AL to Georgia ITS

- Transfer Amount: 1000 MW
- Year: 2016
- Transfer Type: Generation to Generation
- Source:
New generator interconnecting to the South Bessemer 500 kV substation near Birmingham, AL
- Sink:
Generation within the Georgia ITS
- Additional Analysis:
Provide an estimate of the transfer level, above the requested amount, that could result in an angular instability event



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Duke Border to SBA

- Transfer Amount: 2000 MW
- Year: 2016
- Transfer Type: Load to Generation
- Source: Uniform load scale of the Duke area
- Sink: Generation within the SBA



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SCPSA Border to SBA

- Transfer Amount: 200 MW
- Year: 2016
- Transfer Type: Load to Generation
- Source: Uniform load scale of the SCPSA area
- Sink: Generation within the SBA



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TVA Border to SBA

- Transfer Amount: 1500 MW
- Year: 2016
- Transfer Type: Load to Generation
- Source: Uniform load scale of the TVA area
- Sink: Generation within the SBA



North Georgia to Mississippi

- Transfer Amount: 600 MW
- Year: 2016
- Transfer Type: Generation to Generation
- Source:
New generator interconnecting to the 500 kV near Murray County, GA
- Sink:
Generation within SMEPA's and Mississippi Power Company's territory (generation sink allocation to be determined by load ratio of SMEPA and MPC)

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Questions?