

**HARC**

# Dynamic Mapping of ERCOT Interconnection Process

Gavin Dillingham, PhD

Satish Ravindran P.E, CEM, LEED Green Assoc.

HARC

# Agenda

- Interconnecting in Texas – Greater than 10 MW
- Process Requirements
- Introduce Interconnection Dynamic Mapping Tool



# SECO DOE Project

- Regulatory and Policy Barriers to CHP
  - Department of Energy and State Energy Conservation Office – SEP
- Air Permitting
- Stand-by Rates
- Power Export
- Interconnection



# Interconnection > 10MW – Stakeholder interviews

- Interconnection process > 10 MW is DEMANDING
- Two thirds of projects in state > 10MW
- Process times average 270 days to 1020 days
- ERCOT transmission infrastructure is strained- requires expensive upgrades
- Unclear understanding of modeling requirements



# Interconnection > 10MW – What we heard from ERCOT

- Developers may use incorrect equipment – does not match with study
- Uncertainty of modeling data required by developers
- Incorrect understanding of process and documents
- Timelines are not followed
- Upgrades to infrastructure takes a long time
- Telemetry not set up properly



# Interconnection > 10 MW

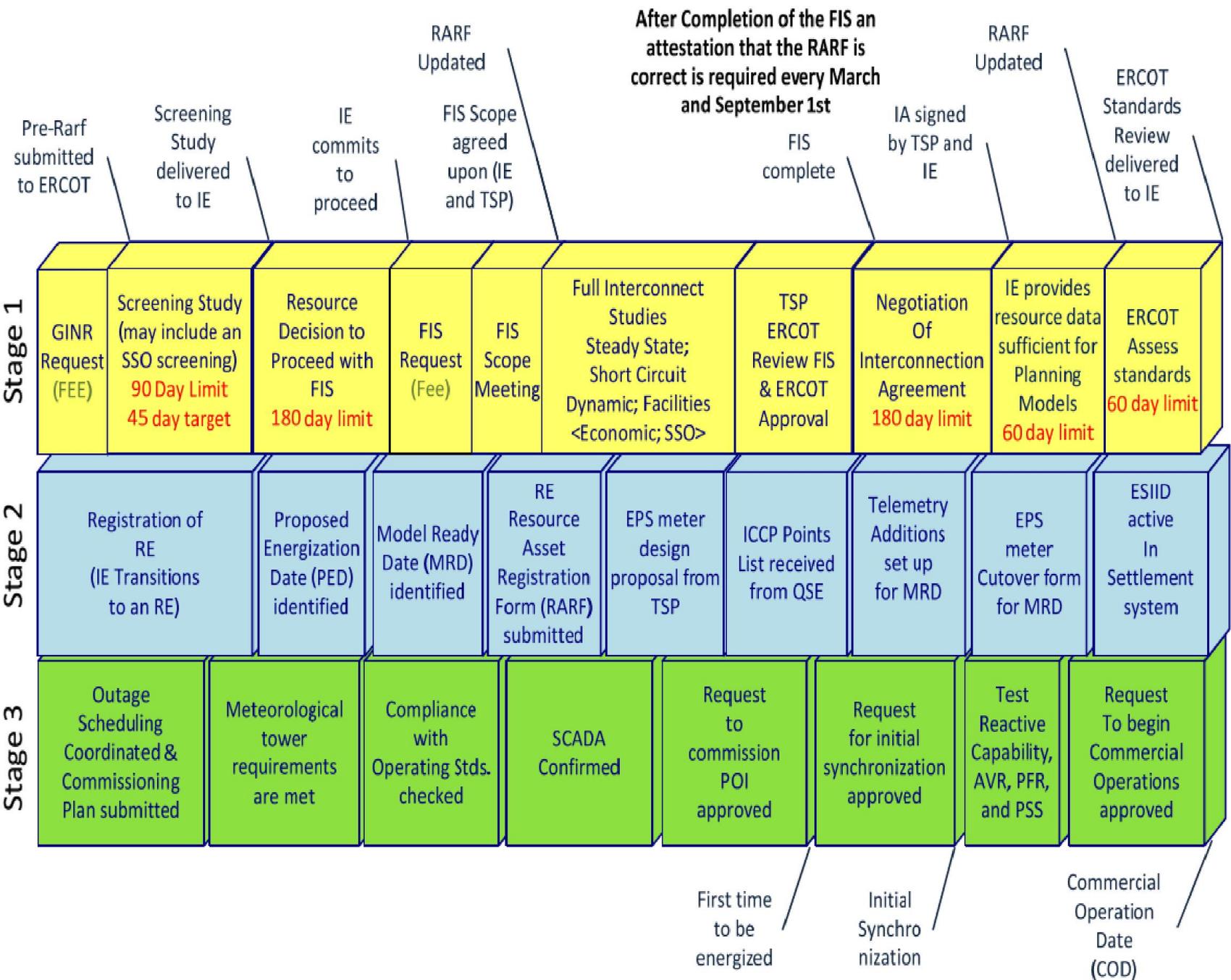
- Affects Project Design and Economics
- Developers need deeper understanding of the technical requirements of process
- Solid understanding of market protocols and operating guides
- Closer communication between TSP, ERCOT and developers



# Process Requirements

- Stringent ERCOT Compliance Review
- Increasing Technical Data Requirements
- Complex Facility studies
- Generator Modeling requirements differ for each project
- Testing and Telemetry requirements





# Online Interconnection Wizard

- An interactive / simplified Users Guide
- Avoid paperwork delays and incorrect submissions
- A system to notify approaching deadlines
- Avoid communication delays
- Breaks complicated steps into simplified single task sub-steps



# Online Interconnection Wizard

- Keep track of timelines
- Tips and Tricks based on feedbacks from other stakeholders –common pitfalls, incorrect information etc.
- One place to manage multiple projects



# Online Interconnection Wizard

## Online Interconnection Wizard

[My Account](#) [Logout](#)

 Welcome back! Your last visit was on 03 / 08 / 2015 at 3:15 pm.

 You must resubmit required documents for project DEF #123 in 10 Days

Create New Project

Actions ▾

Filter by project attributes or search by keyword



<input type="checkbox"/>	Name	Status	Reminder	Creation Date	Laste Visit Date
<input type="checkbox"/>	ABC #123		Enabled	02/15/2015	03/07/2015
		<p>Getting Started   Stage 1   Stage 2   Stage 3</p> 			
		<p>Current Step: Screening study and GINR Action Required: Submit all required Documents Due date: N/A</p>			
<input type="checkbox"/>	ABC #124		Enabled	02/16/2015	03/07/2015
<input type="checkbox"/>	ABC #125		Disabled	03/01/2015	03/01/2015
<input type="checkbox"/>	DEF #122		Enabled	01/16/2015	02/15/2015
<input type="checkbox"/>	DEF #123		Enabled	02/16/2015	03/07/2015
<input type="checkbox"/>	DEF #124		Disabled	02/26/2015	03/07/2015



# Online Interconnection Wizard

## Project ABC #01

Home Summary Getting Started **Stage 1** Stage 2 Stage 3

### Interconnection Studies and Project Development

#### Screening study and GINR

● Submit Documents ● ERCOT Approval ● Screening Study

#### Documents Required

1. Generation Entity Info Sheet
2. Preliminary RARF
3. Screening Study Fee

[ERCOT Interconnection Guide Book](#)

I have submitted all required documents.

[< Previous](#) [Next >](#)

#### Interconnection Status

  
Good

Step 1: Submit Documents ▾

Step 2: ERCOT Approval ▾

**7-10**  
Days

Step 3: Screening Study ▾

**90**  
Days

#### Tips for successful GINR application

- 1) Provide accurate information and test data about generators
- 2) Provide all data for stability studies and sub synchronous studies
- 3) Don't forget the proposed commercial operation date (COD) and proposed Point of Interconnect (POI)!



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When did you submit them?

[< Previous](#) [Next >](#)

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Good

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[ERCOT Interconnection Guide Book](#)

I have submitted all required documents.  
When did you submit them?

Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31	1	2	3	4

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✓ Success! Your data has been successfully saved.

#### Documents Required

1. Generation Entity Info Sheet
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[ERCOT Interconnection Guide Book](#)

✓ I have submitted all required documents.  
When did you submit them?   
You have submitted all required documents on **March 10, 2015** ⚙

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7-10 Days

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Submit Documents **ERCOT Approval** Screening Study

You have submitted all required documents on *March 10, 2015* ⚙️

Has ERCOT approved your submission?

Yes No

When did you get notified?

< Previous Next >

#### Interconnection Status

Good

#### Step 1: Submit Documents

Finished

#### Step 2: ERCOT Approval

7-10  
Days

#### Step 3: Screening Study

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Days



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Submit Documents **ERCOT Approval** Screening Study

You have submitted all required documents on *March 10, 2015* ⚙

Has ERCOT approved your submission?

**Yes** No

When did you get notified? 03/18/2015

< Previous

March 2015						
Su	Mo	Tu	We	Th	Fr	Sa
1	2	3	4	5	6	7
8	9	10	11	12	13	14
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Submit Documents **ERCOT Approval** Screening Study

Success! Your data has been successfully saved.

You have submitted all required documents on *March 10, 2015*

Has ERCOT approved your submission?

**Yes** No

When did you get notified?

ERCOT has approved your submission on *March 18, 2015*

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#### Interconnection Status

Good

#### Step 1: Submit Documents

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7-10  
Days

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Submit Documents | **ERCOT Approval** | Screening Study

You have submitted all required documents on *March 10, 2015* ⚙️

Has ERCOT approved your submission?

Yes  No

When did you get notified?

#### Interconnection Status

Good

#### Step 1: Submit Documents

Finished

#### Step 2: ERCOT Approval

7-10  
Days

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Days



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Submit Documents ● ERCOT Approval ● Screening Study

You have submitted all required documents on *March 10, 2015* ⚙

Has ERCOT approved your submission?

Yes No

When did you get notified?

< Previous Next >

#### Interconnection Status

⚠  
Re-submit Application

#### Step 1: Submit Documents

⚠  
Re-submit Application

#### Step 2: ERCOT Approval

7-10  
Days

#### Step 3: Screening Study

90  
Days



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Submit Documents ● ERCOT Approval ● Screening Study

Success! Your data has been successfully saved.

You have submitted all required documents on **March 10, 2015**

Has ERCOT approved your submission?

Yes No

When did you get notified? 03/18/2015

ERCOT has denied your submission on **March 18, 2015**  
You have **10 days** to re-submit with additional information.

Previous Next

#### Interconnection Status

Re-submit Application

#### Step 1: Submit Documents

10 Days  
Re-submit Application

#### Step 2: ERCOT Approval

7-10 Days

#### Step 3: Screening Study

90 Days

