

# 2013 ITP20 Scope – Development Process for Recommended Expansion Plan

Charles Cates

ESWG

March 16, 2012



# Goal of ITP20

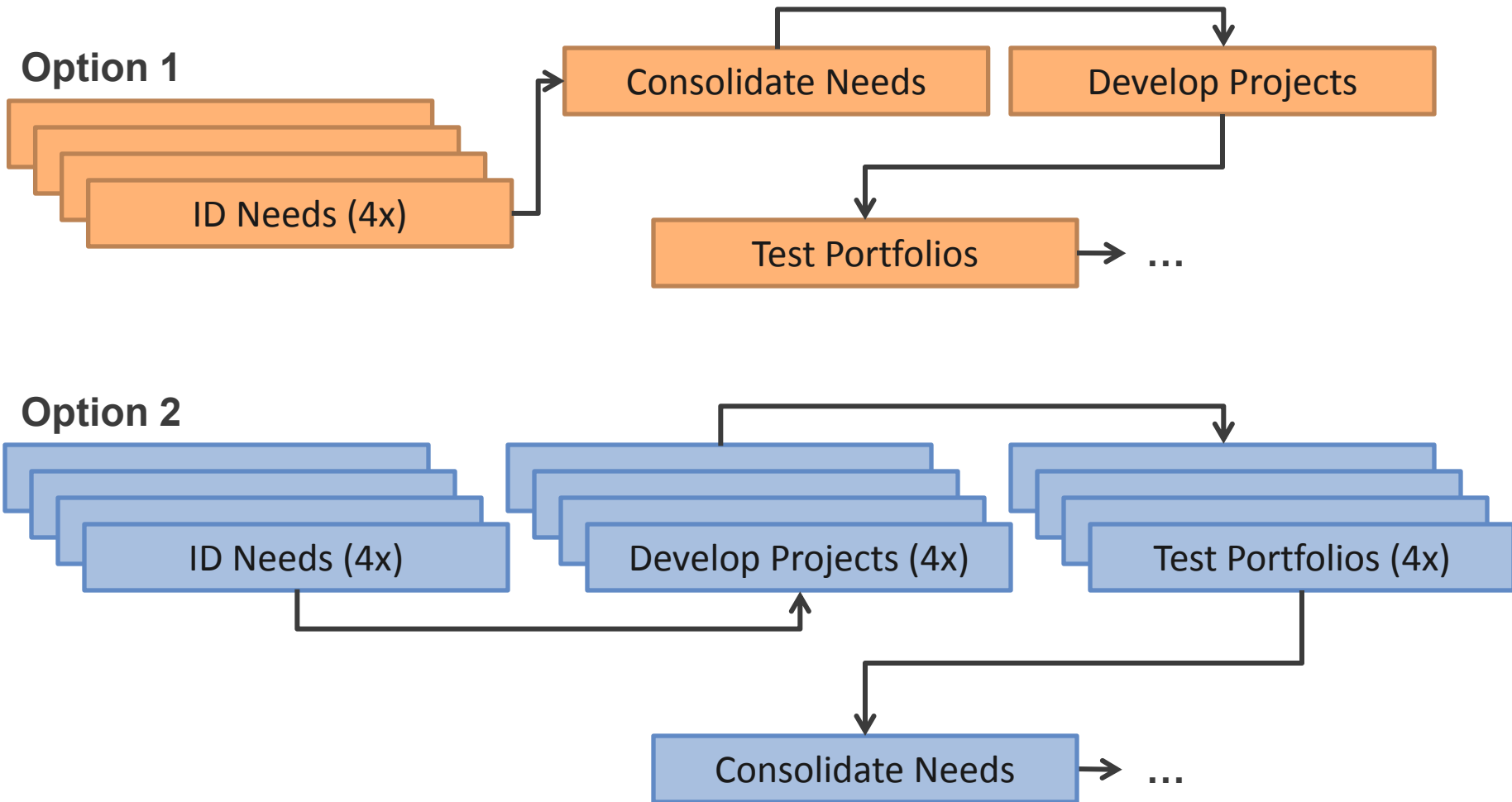
- Provide a long-range toolbox of projects for planning
- Road map to the future
- A single transmission plan recommendation
  - Versatile
  - Flexible
  - Highway based
  - Delivery of energy to market
  - Can work under any future



# Consolidation Options 1 & 2

- **Two Approaches**
  - **1. Needs: Common Problems Across Futures**
  - **2. Projects: Common Projects Across Futures**
- **Either option should deliver nearly identical consolidated final transmission plan**

# Differences in Process for Four Futures



# Impact of Option 2

- **If Project based approach is taken**
  - **Additional 1,250 hours of analysis**
  - **Budgetary impact: \$250,000**
    - **Estimates do not include stakeholder cost/time**
- **Discussion Item: What is the value of the intermediate steps for the Project approach?**

# Recommendation – Option 1

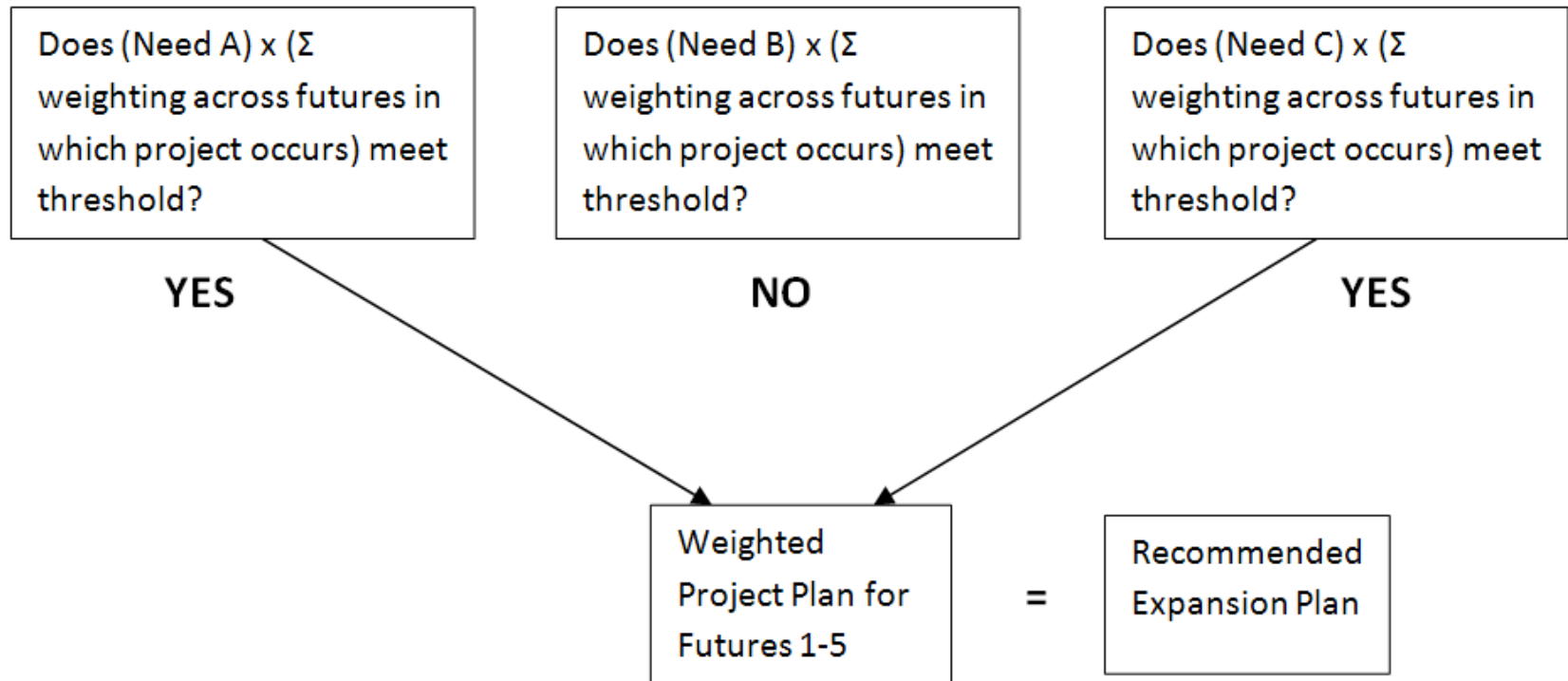
- **Staff recommends Option 1 for the development of a transmission plan across multiple futures in the 2013 ITP20**
  - **This option would take approximately 1,250 fewer hours than Option 1**
  - **Option 2 is \$250,000+ more expensive than Option 1**
  - **Option 1 delivers nearly identical consolidated transmission plan to Option 2**

# Methods for Consolidation

- **Option 1 or Option 2 use one of the following:**
  - **Weighting**
    - Select the common elements with a weighting system to consolidate the needs/projects
  - **BAU+**
    - Include all needs/projects from the Business as Usual (BAU) plan and use a weighting mechanism to identify incremental needs/projects from the remaining futures
  - **Commonality**
    - Only carry forward needs/projects common to all of the futures

# Weighting

- Weight each of the futures
- Weighting & threshold narrows needs/projects





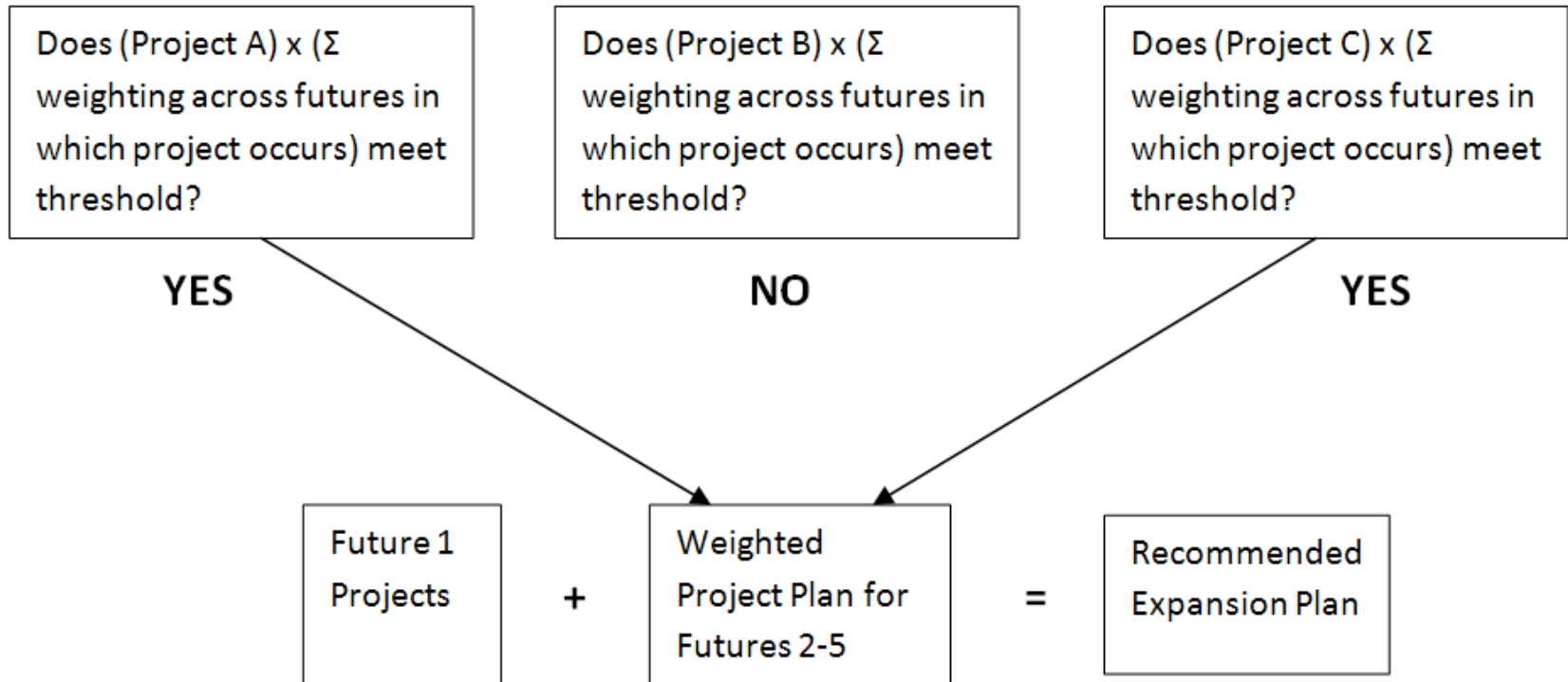
# Weighting Example

- **Threshold  $\geq$  60% (Example)**
- **Project A included in recommended portfolio**
- **Projects B, C, and D NOT in recommended portfolio**

	<b>Future 1</b>	<b>Future 2</b>	<b>Future 3</b>	<b>Future 4</b>	<b>Future 5</b>	<b>Score</b>	<b>Inclusion in Expansion Plan?</b>
	<b>50%</b>	<b>15%</b>	<b>10%</b>	<b>15%</b>	<b>10%</b>		
Project A	✓	✓				65%	Yes
Project B		✓	✓	✓		40%	No
Project C		✓	✓		✓	35%	No
Project D	✓					50%	No

# BAU+

- Future 1 (BAU) needs/projects as core, PLUS
- Weight remaining futures needs/projects



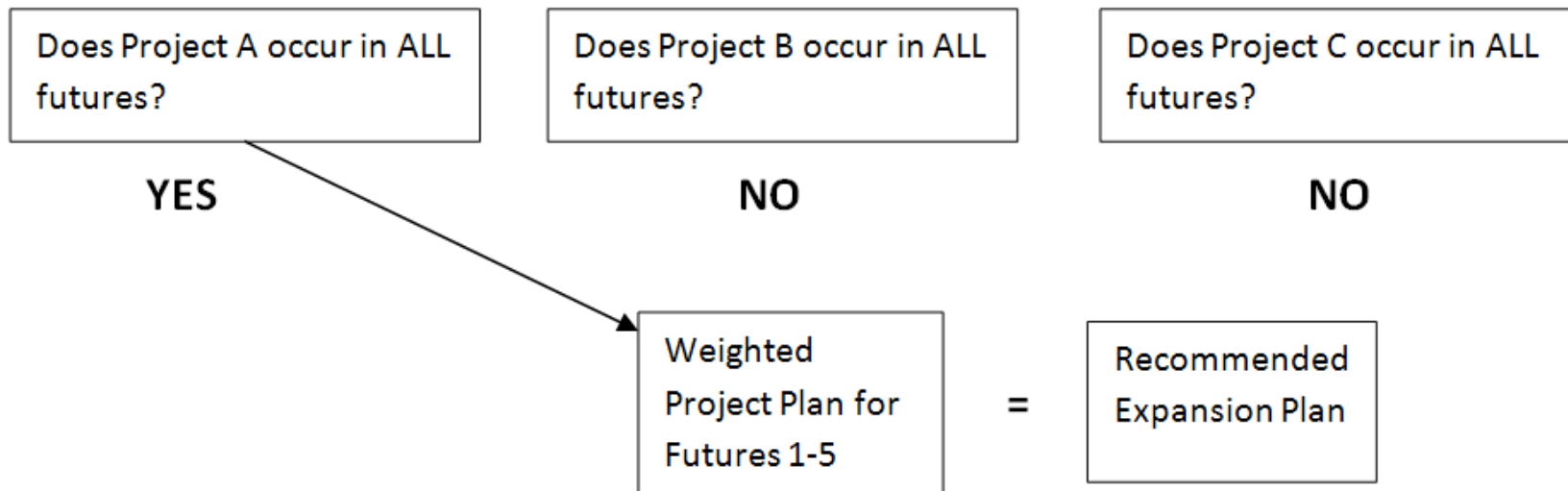
# BAU+ Example

- Threshold  $\geq 60\%$  in example
- Projects included in recommended portfolio:
  - Projects D In BAU
  - Project A  $\geq 60\%$
- Projects B & C NOT in recommended portfolio

	Future 1	Future 2	Future 3	Future 4	Future 5	Score	Inclusion in Expansion Plan?
Project A	40%	✓	✓	✓	✓	60%	Yes
Project B		✓	✓	✓		50%	No
Project C		✓			✓	30%	No
Project D	✓					40%	Yes

# Commonality

- Only needs/projects in all futures are or addressed by the recommended portfolio



# Commonality Example

- **Threshold = 100% in example**
- **Project D included in recommended portfolio**
- **Projects A, B, and C NOT in recommended portfolio**
  - **Do not occur in every future**

	<b>Future 1</b>	<b>Future 2</b>	<b>Future 3</b>	<b>Future 4</b>	<b>Future 5</b>	<b>Score</b>	<b>Inclusion in Expansion Plan?</b>
Project A	✓	✓				65%	No
Project B		✓	✓	✓		40%	No
Project C		✓	✓		✓	35%	No
Project D	✓	✓	✓	✓	✓	100%	Yes

# Comparison of the Approaches

		Option 1 (Group by Need) or Option 2 (Group by Project)	
Weighting	pro	Good representation of all futures	
	con	Some BAU upgrades could potentially not be included	
BAU+	pro	All BAU upgrades are included, upgrades in other futures may be included as deemed necessary	
	con	Strong bias to BAU future, may overbuild to this future	
Commonality	pro	Insulated from significant policy changes	
	con	May leave out elements from BAU future or multiple futures that could later turn out to be necessary or beneficial	

# Recommendation – Weighting Approach

- **Staff recommends the Weighting approach for the development of a transmission plan across multiple futures in the 2013 ITP20**
  - **Allows for most balanced treatment of various futures**
  - **Avoids tendency to overbuild for BAU future**
  - **Meets the goals of the ITP20**
    - **Versatile**
    - **Flexible**
    - **Can work under any future**