



Tracking New Coal-Fired Power Plants

(data update 12/13/2010)

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Tracking New Coal-Fired Power Plants

This report is intended to provide an overview of proposed new coal-fired power plants that are under development. This report may not represent all possible plants under consideration but is intended to illustrate the potential that exists for installation of new coal-fired power plants. Additional perspective has been added for non-coal-fired generation additions in the U.S. and coal-fired power plant activity in China.

Experience has shown that public announcements of power plant developments do not provide an accurate representation of eventually commissioned power plants. Actual plant capacity commissioned has historically been significantly less than new capacity announced.

The report focuses on those coal-fired power plant projects that have achieved significant progress toward completion, to provide a more accurate assessment of the ability of this segment of the power generation industry to support demand for new electricity capacity in various regions of the United States.

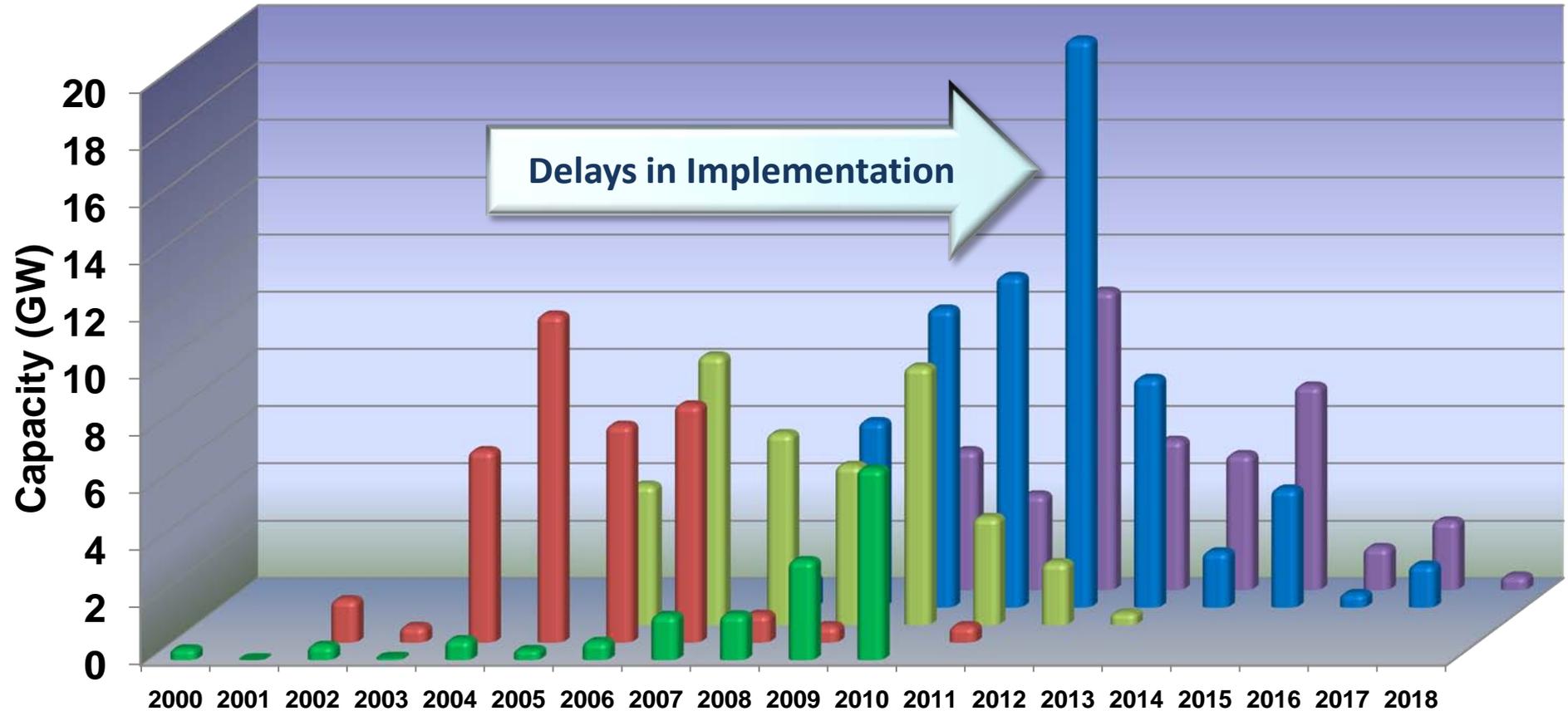
The Department of Energy does not warrant the accuracy or suitability of this information.

Tracking New Coal-Fired Power Plants

- **This report provides a perspective of coal-fired power plants that are currently under development, with a focus on those having made significant progress toward achieving commercial operation**
- **The status of projects identified varies from project announcements to those under construction**
- **Announced projects are not necessarily strong indicators of commitment of capital and human resources to actual development and follow-through to actual capacity additions is highly dependent on the market environment**
- **Plants that are permitted or under construction (“Progressing Projects”) reflect a more significant financial and human resource commitment to completion and offer a better perspective of the new generation capacity that may be forthcoming**

Past Capacity Announcements vs. Actual

Figure 1

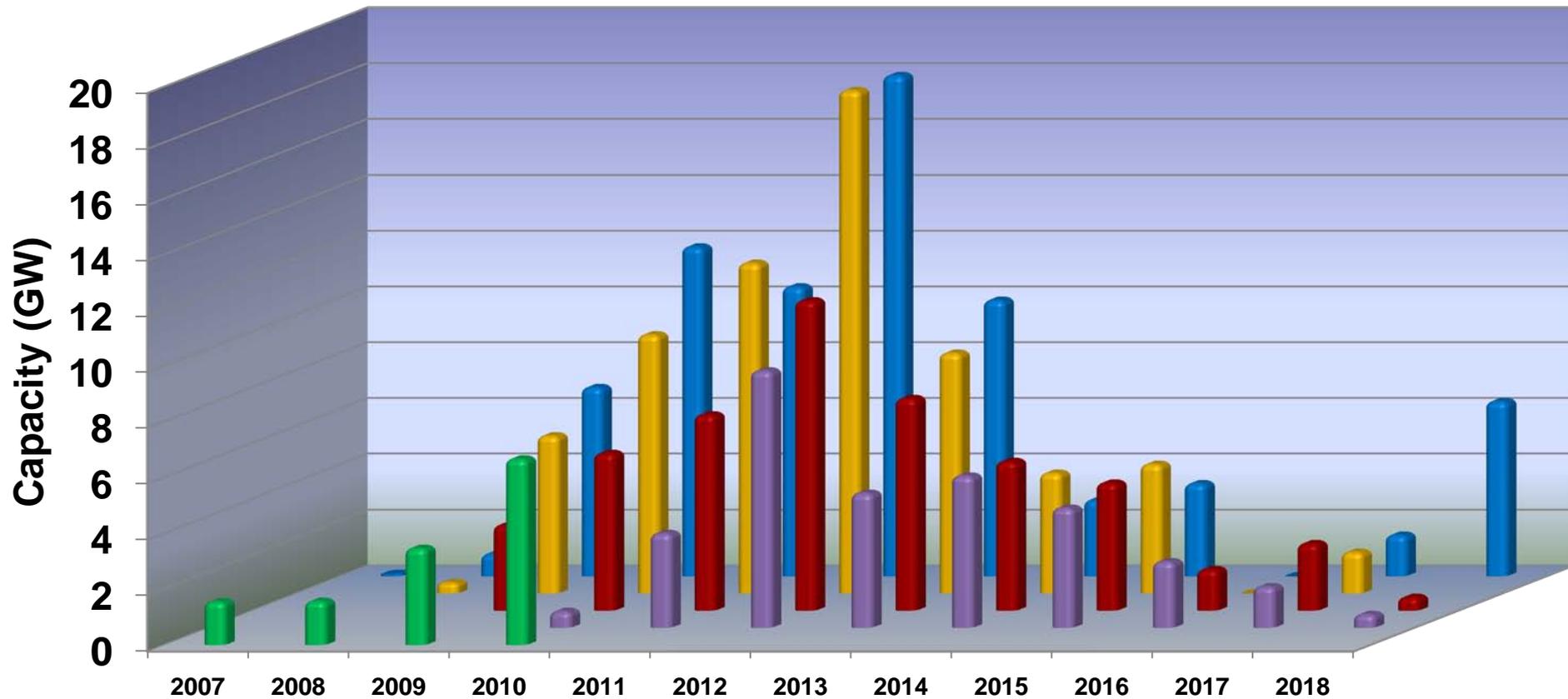


Actual capacity completed has been shown to be significantly less than proposed capacity; the 2002 report listed 11,455 MW of proposed capacity for the year 2005 when only 329 MW were constructed.

■ Actual
 ■ 2002 Report
 ■ 2005 Report
 ■ 2007 Report
 ■ 2010 Report

Latest Capacity Announcements vs. Actual

Figure 1a



Total Identified Capacity Declines Due to Commissioning, Cancellations, and Fewer Postponements



Current Coal-Fired Capacity Projects *(Annual Change)*

Table 1

		<i>Number of Plants</i>			<i>Capacity (MW)</i>		
<i>General Status</i>		Jan 2010	Dec 2010	<i>Net Change</i>	Jan 2010	Dec 2010	<i>Net Change</i>
Progressing Projects	<i>Under Construction</i>	22	12	-10	13,755	7,619	-6,136
	<i>Near Construction</i>	1	1	0	320	320	0
	<i>Permitted</i>	8	8	0	3,280	6,446	+3,166
	SUB TOTAL	31	21	-10	17,355	14,385	-2,970
Uncertain Potential and Timing	<i>Announced (early stages of development)</i>	46	36	-10	26,233	17,385	-8,848
	TOTAL	77	57	-20	43,588	32,259	-11,329
	Commissioned this Period	-	11	+11	-	6,682	+6,682
TOTAL December 2010 Progressing and Commissioned			32	+1		21,067	+3,712

<i>Status Listing</i>	<i>Description</i>
<i>Under Construction</i>	Project is under construction.
<i>Near Construction</i>	Project has been approved; majority or all permits are obtained. Sponsor is contracting vendors and Engineering, Procurement and Construction (EPC) contractors. Site preparation has begun.
<i>Permitted</i>	In the permitting phase. Two or more permits approved or fuel or power contracts have been negotiated.
<i>Announced</i>	Early stages of development to filing for permits. May include a feasibility study.

Source: Ventyx – Velocity Suite
 Data reflects change between 1/8/2010 and 12/13/2010

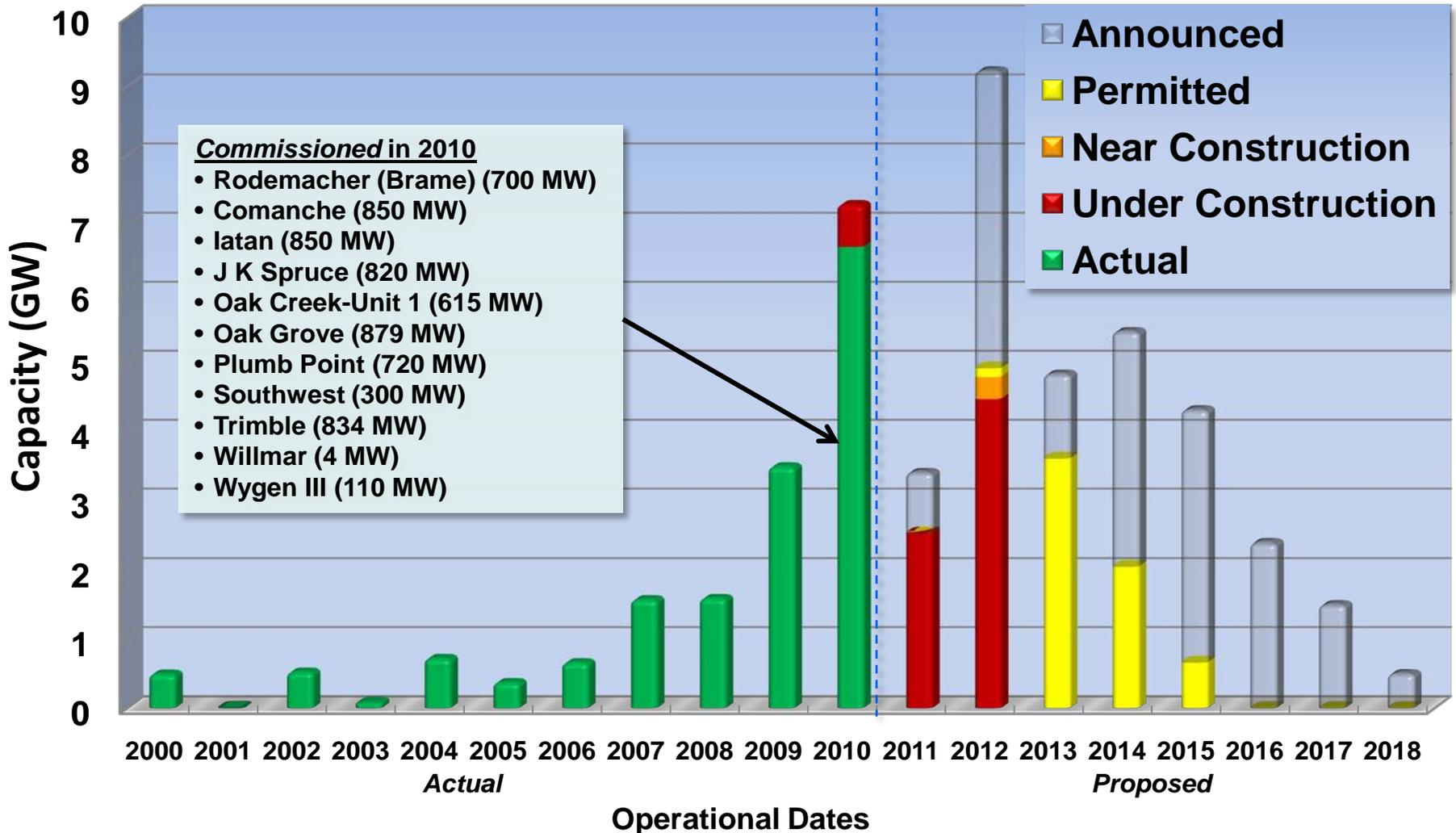
Current Capacity Additions by Years

Refer to Table 1

- Table 1 reflects the current status of coal-fired plant development activity as of December 13, 2010 (*January 8, 2010 through December 13, 2010*)
- “*Progressing*” plants represent projects with status indicating permitted, near construction, or under construction
- “*Progressing*” plants have attained a higher likelihood of advancing toward commercial operation; however, regulatory uncertainty, market perception and industry cost increases continue to impact development decisions for all projects
- 6,682 MW (11 plants) have become operational during 2010 as of December 2010; this is the highest level of coal-fired plant *Commissioned* in 25 years (since 1985)
- There has been a net increase of 3,712 MW (+21%) of total *Progressing and/or Commissioned* projects through 2010 over *Progressing* projects in January

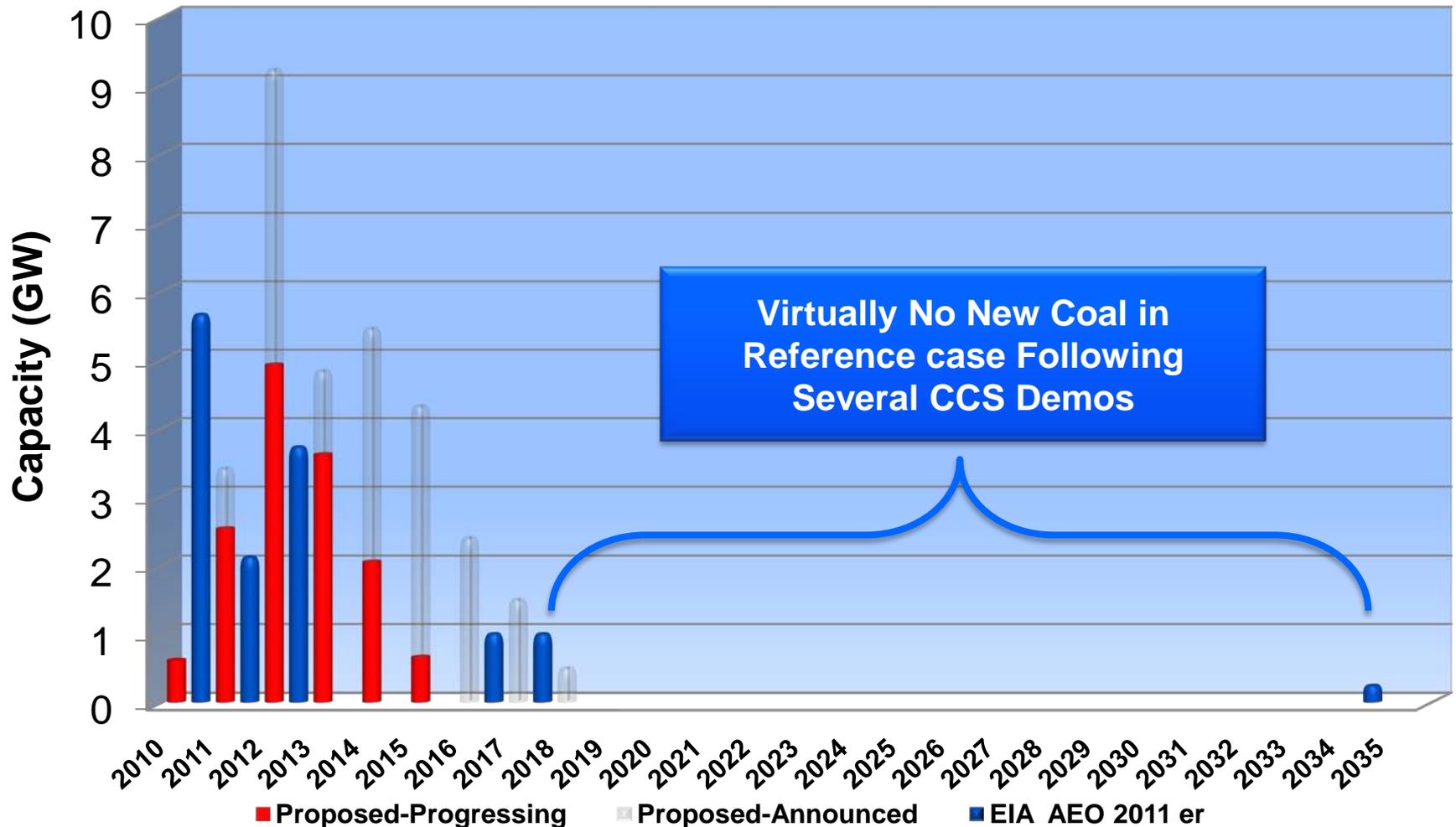
Current Coal Capacity Additions by Years

Figure 2



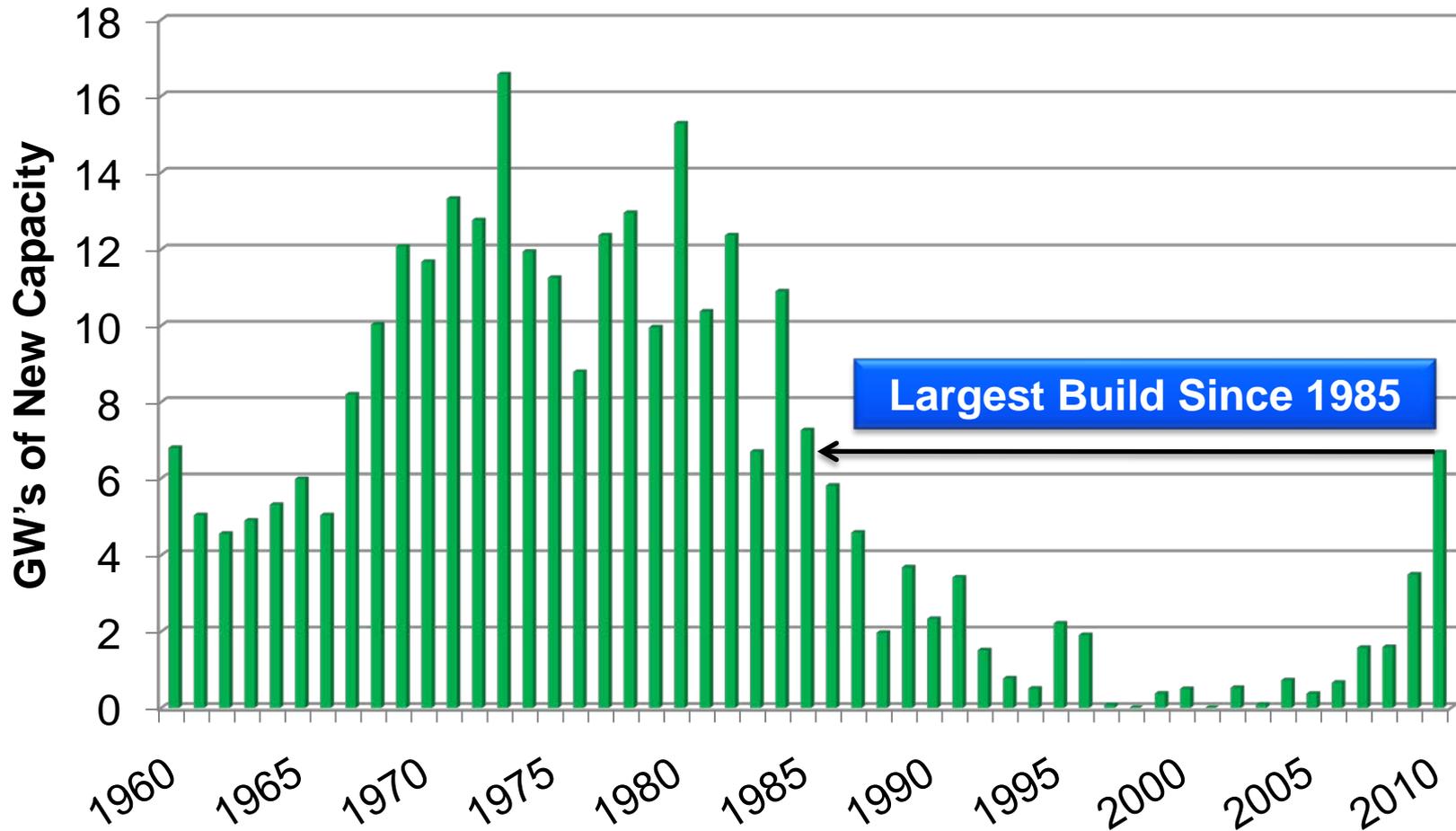
Currently Proposed and Forecasted Coal-Fired Capacity

Figure 3



Last 50 Years of New Coal Capacity

Figure 4



Largest Build Since 1985

Proposed Technologies of New Plants

(with Annual change)

Figure 6

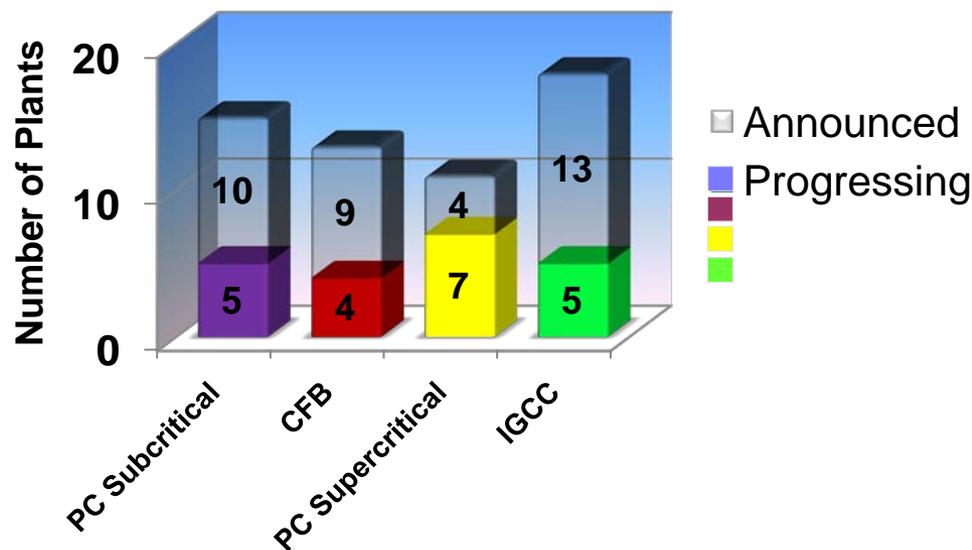
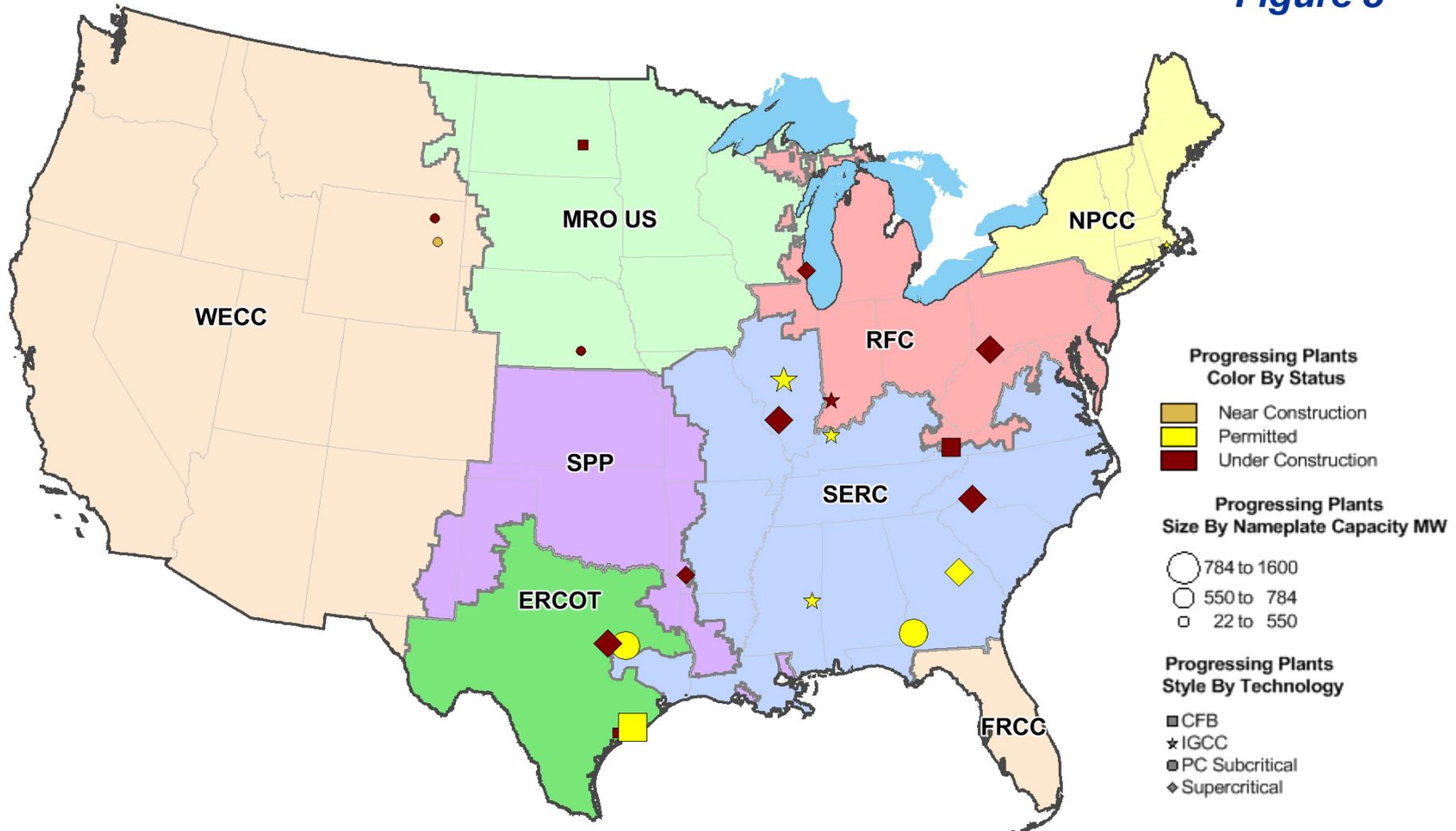


Table 2

Technology Listings	Operational (Since 2000)	Progressing (Permitted, Near-, and Under Construction)		Announced		Total Proposed	
		January 2010	Dec 2010 (Change)	January 2010	Dec 2010 (Change)	January 2010	Dec 2010 (Change)
PC Subcritical	31	11	5 (-6)	13	10 (-3)	24	15 (-9)
CFB	12	6	4 (-2)	11	9 (-2)	17	13 (-4)
PC Supercritical	7	8	7 (-1)	7	4 (-3)	15	11 (-4)
IGCC	1	6	5 (-1)	15	13 (-2)	21	18 (-3)

Location by NERC Regions: Coal-Fired Plants (Permitted, Near Construction, and Under Construction)

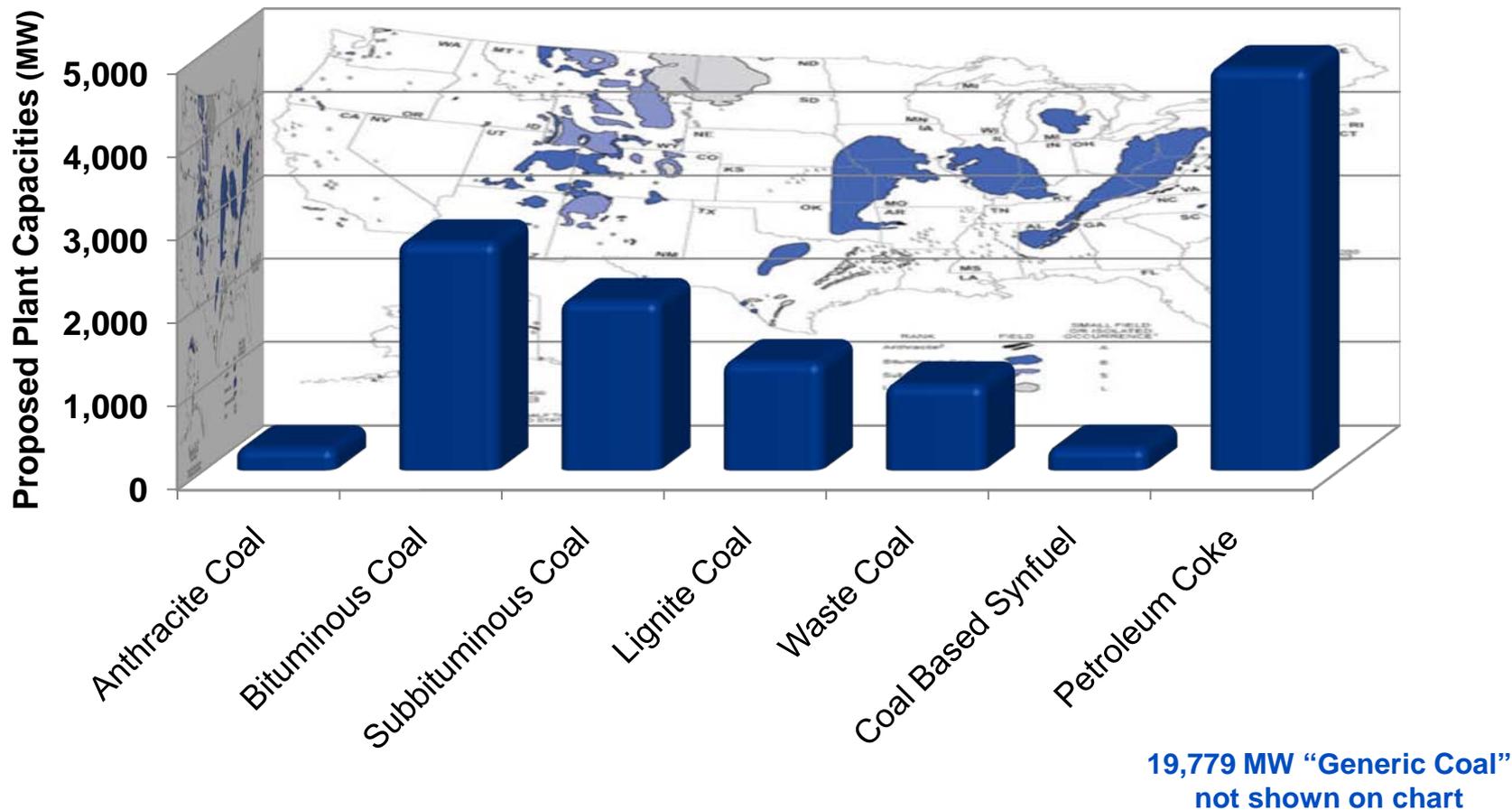
Figure 8



Specified Coal Ranks

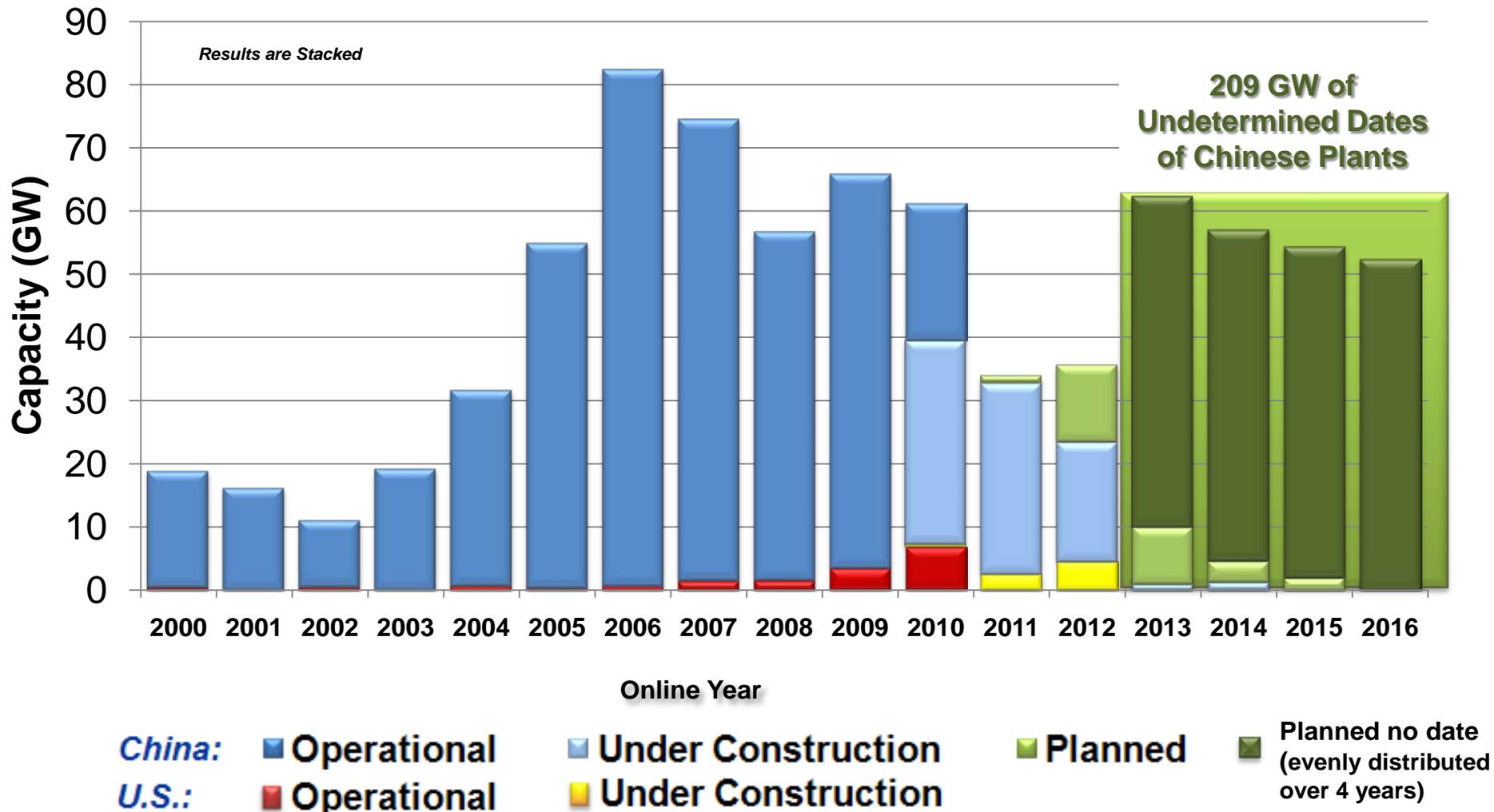
All Proposed Plants

Figure 9



Coal-Fired Build Rate China and United States

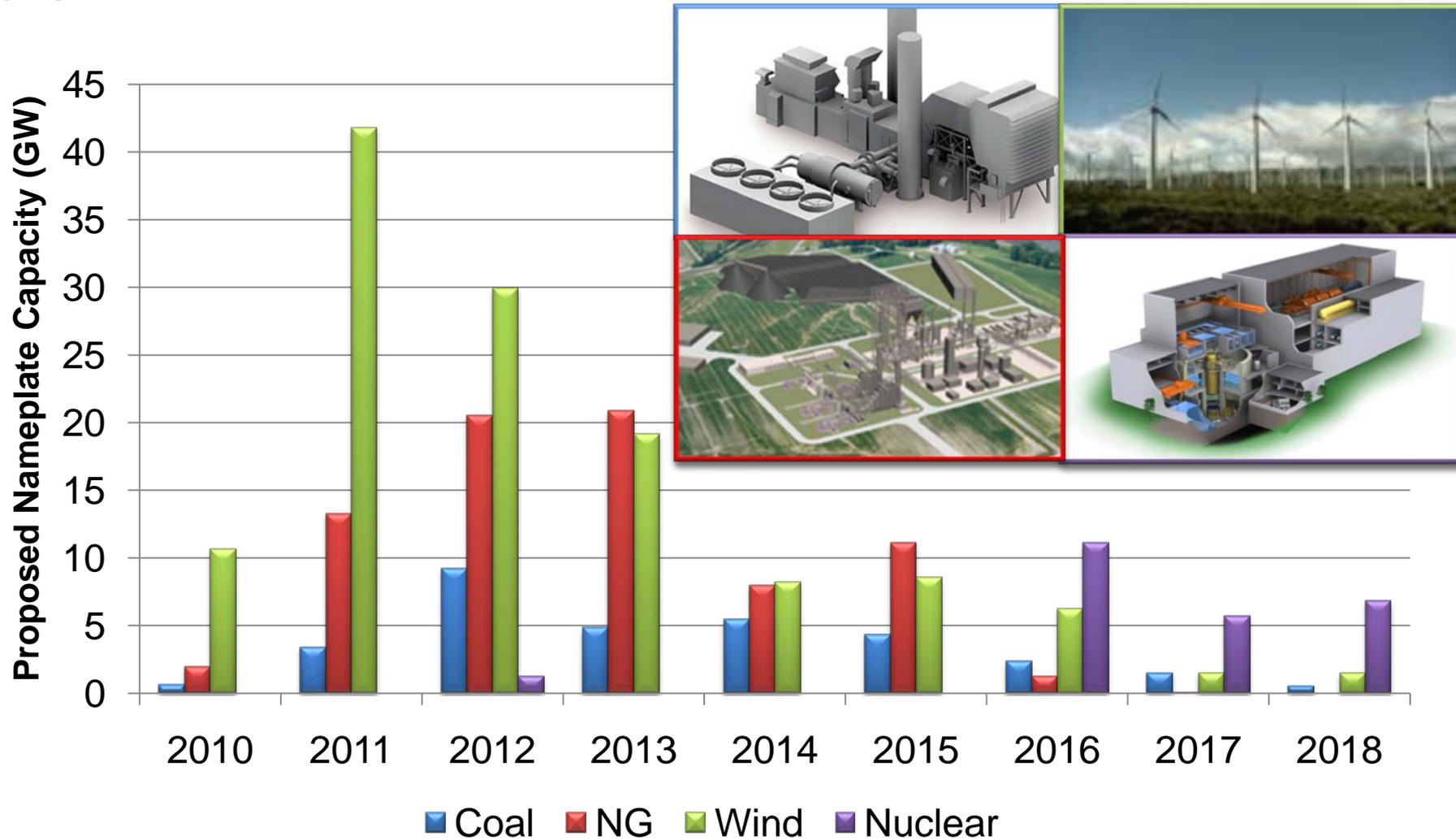
Figure 10



Other Generation Development Activity

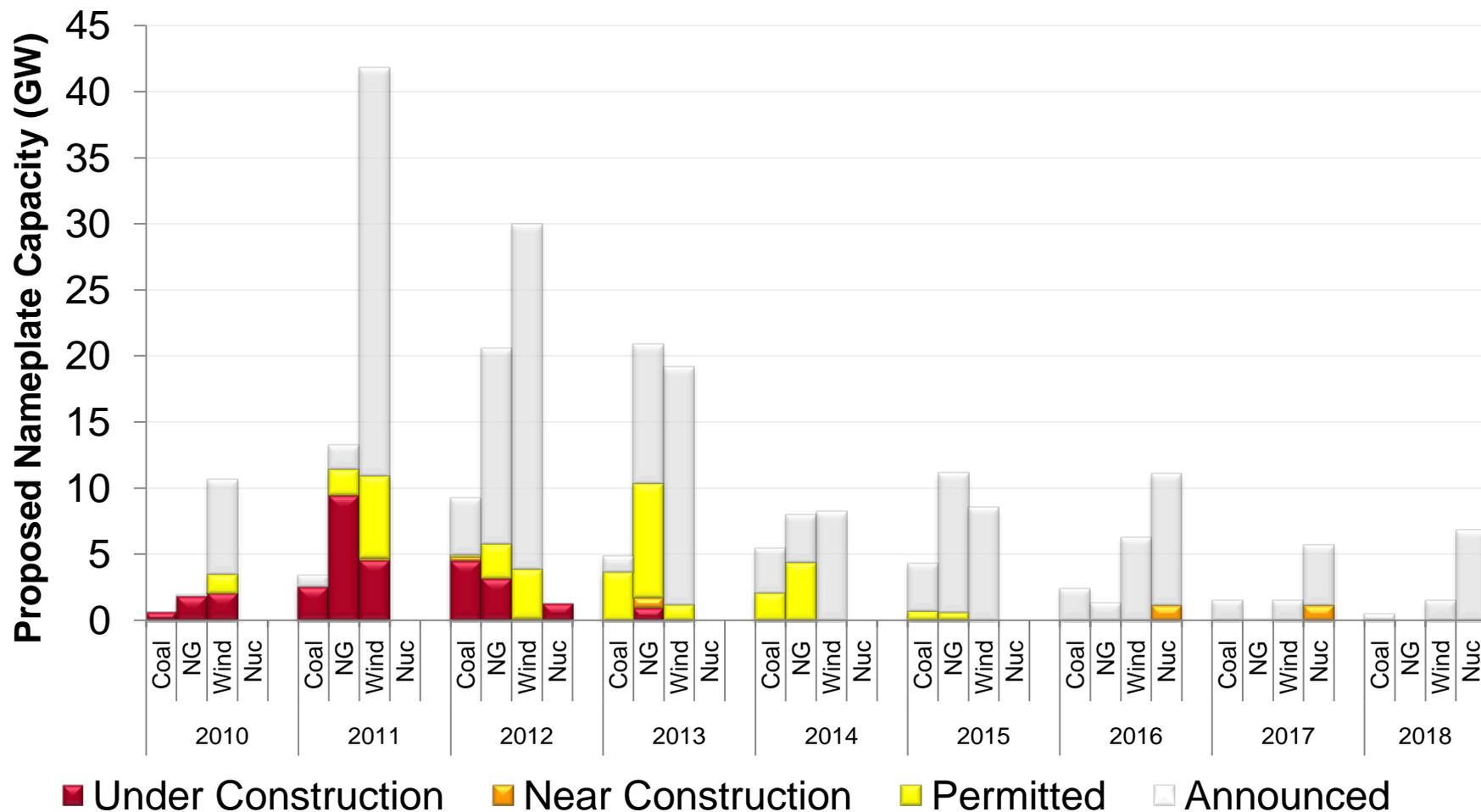
Proposed U.S. New Capacity Coal, Natural Gas, Wind, and Nuclear

Figure 12



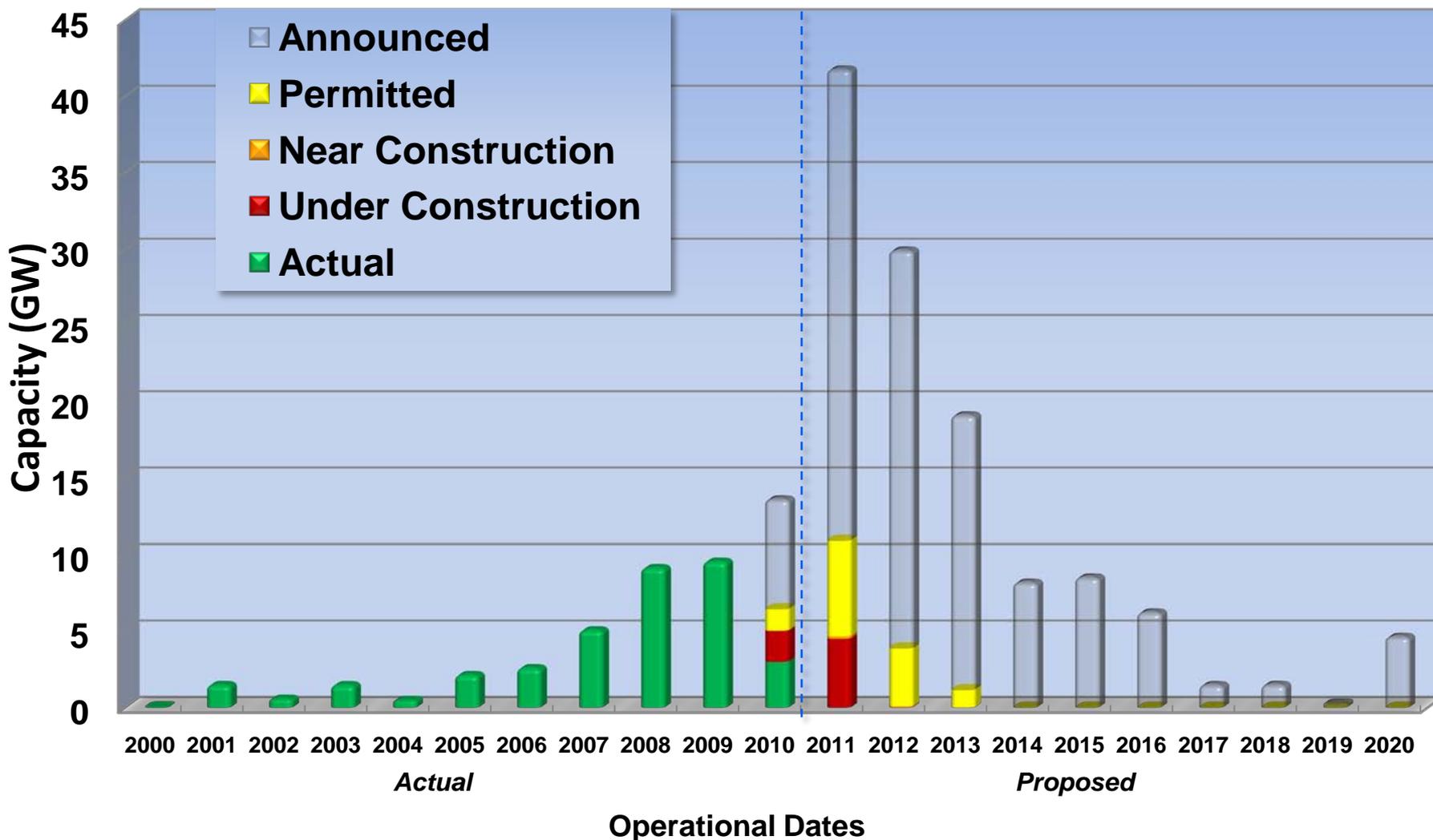
Status of Proposed New U.S. Capacity

Figure 13 Coal, Natural Gas, Wind, and Nuclear



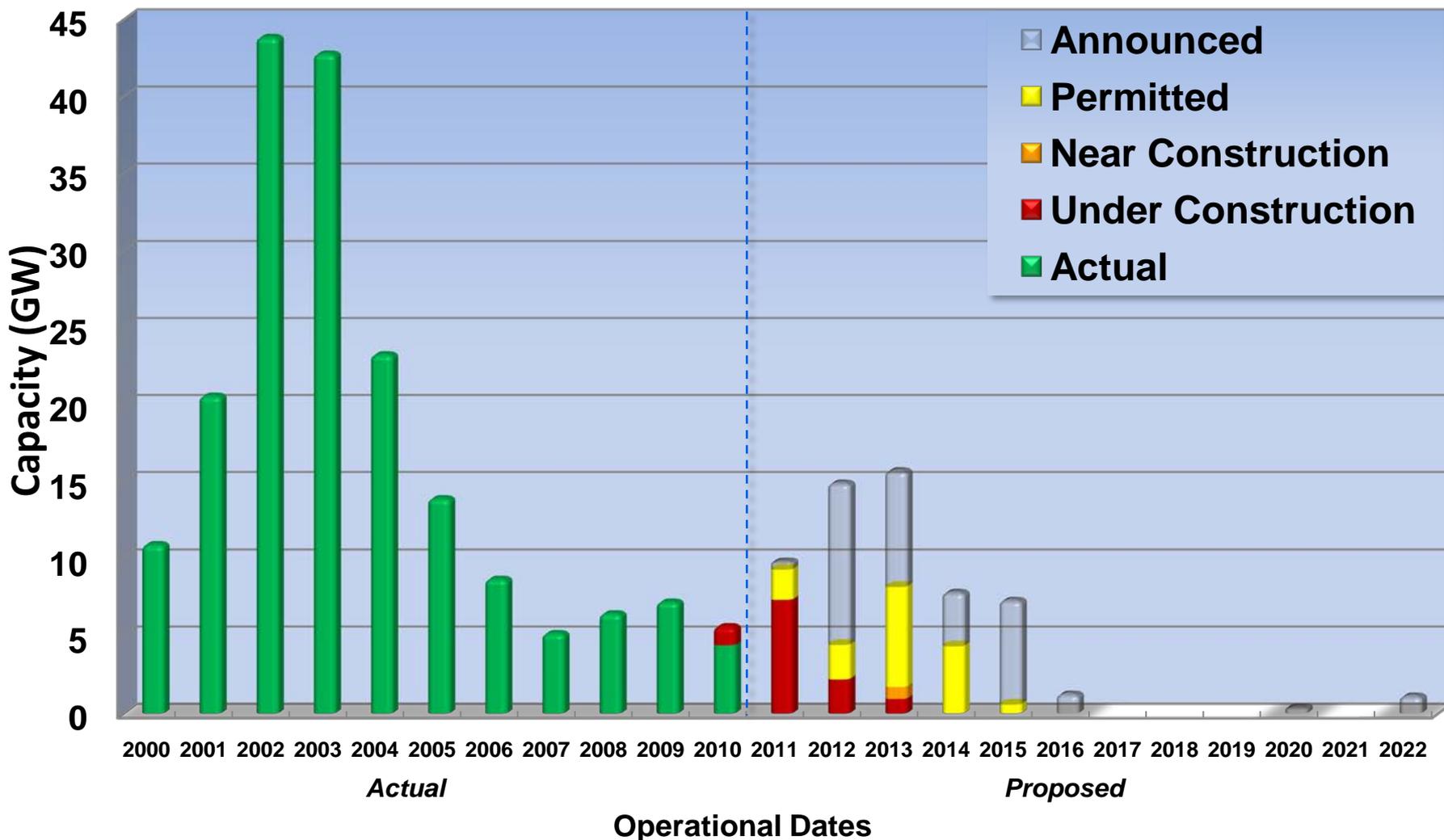
Current Wind Capacity Additions by Years

Figure 14



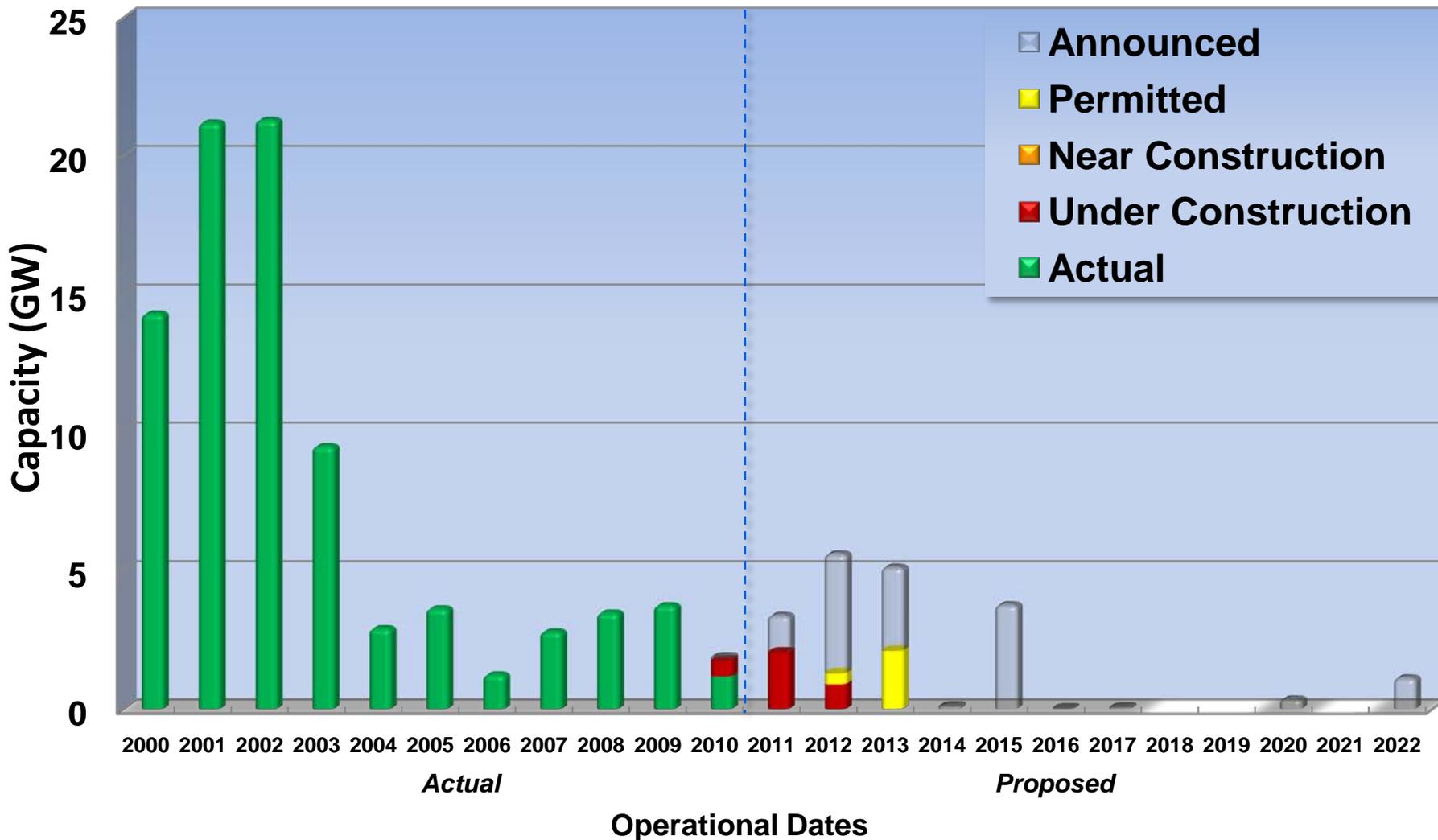
Current NGCC Capacity Additions by Years

Figure 15



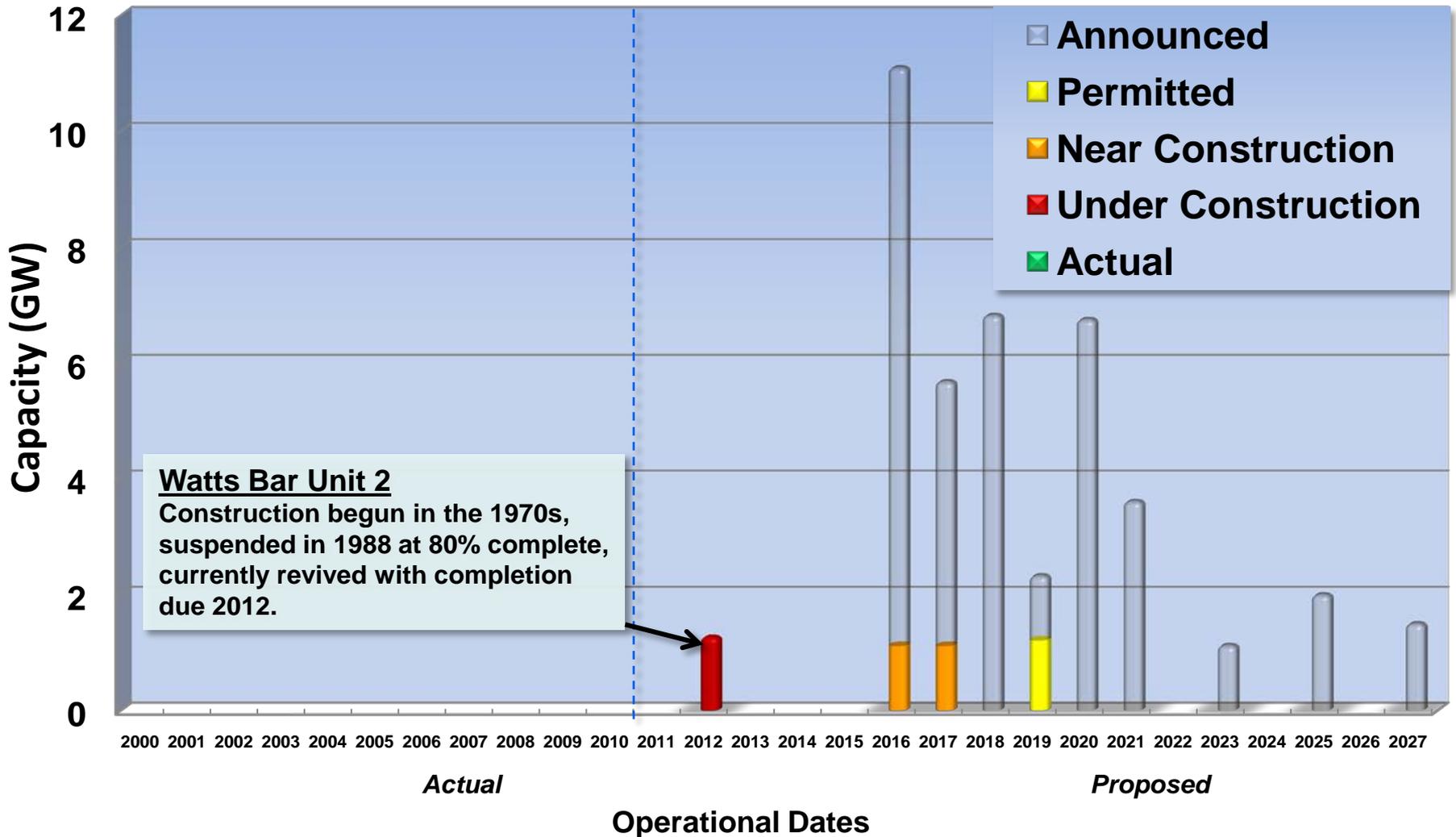
Current NG-GT Capacity Additions by Years

Figure 16



Current Nuclear Capacity Additions by Years

Figure 17



U.S. Coal-Fired Power Plant Summary – Year 2010

1/8/2010 – 12/13/2010

- **Eleven new coal-plants totaling 6,682 MW were *Commissioned* in 2010; the most in 25 years**
- ***Progressing/Commissioned* projects by December 2010 have had a net increase of 1 plant; a net change in capacity of 3,712 MW (+21%) over *Progressing* projects in January 2010**
- **1,599 MW of new capacity has been *Announced* and 6,418 MW have been canceled**
 - Of 6,418 MW canceled plants, 85% were *Announced* phase and 15% were *Progressing*
- **Compared to previous years, fewer projects are being *Announced* to offset recent *Commissioning***