



Tracking New Coal-Fired Power Plants

(data update 7/12/2011)

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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.

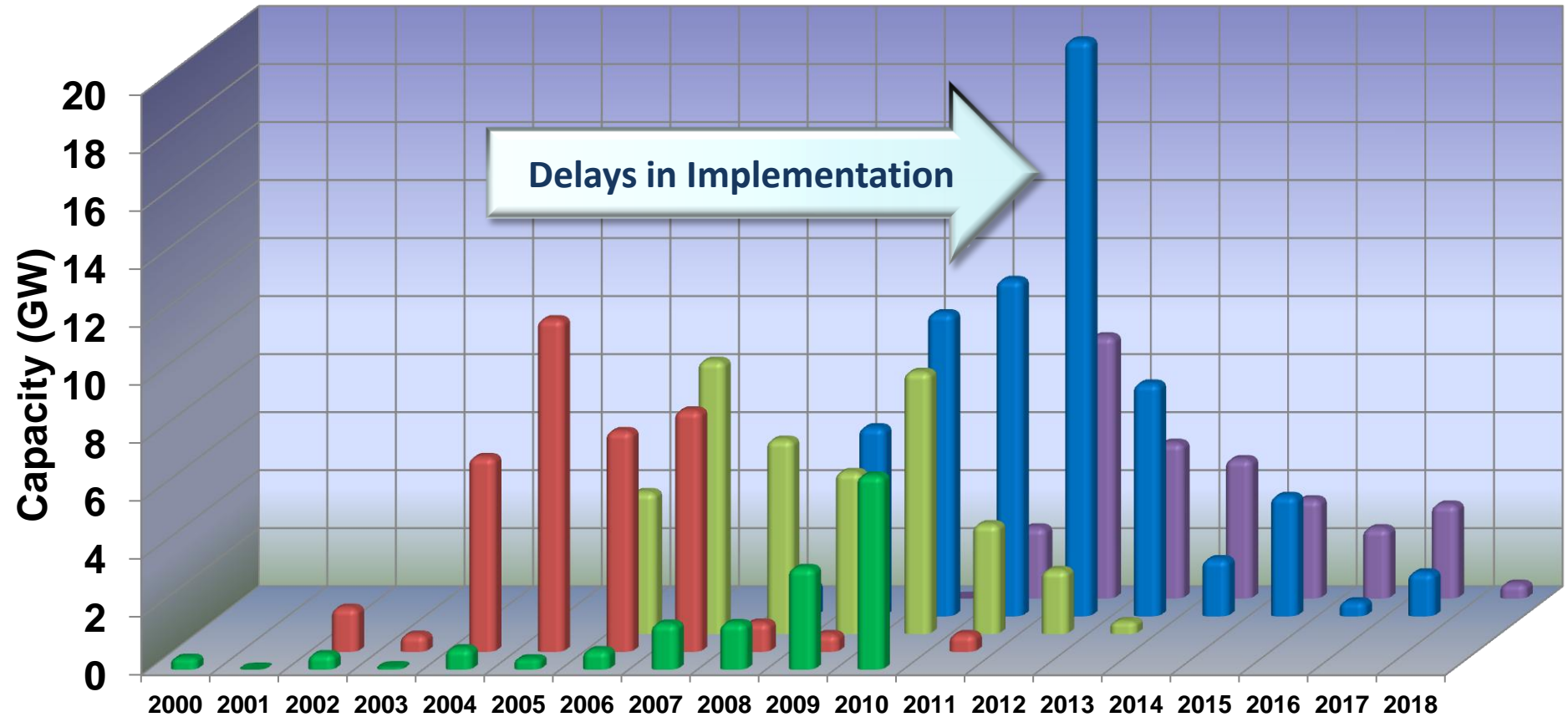
The Department of Energy does not warrant the accuracy or suitability of this information.

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

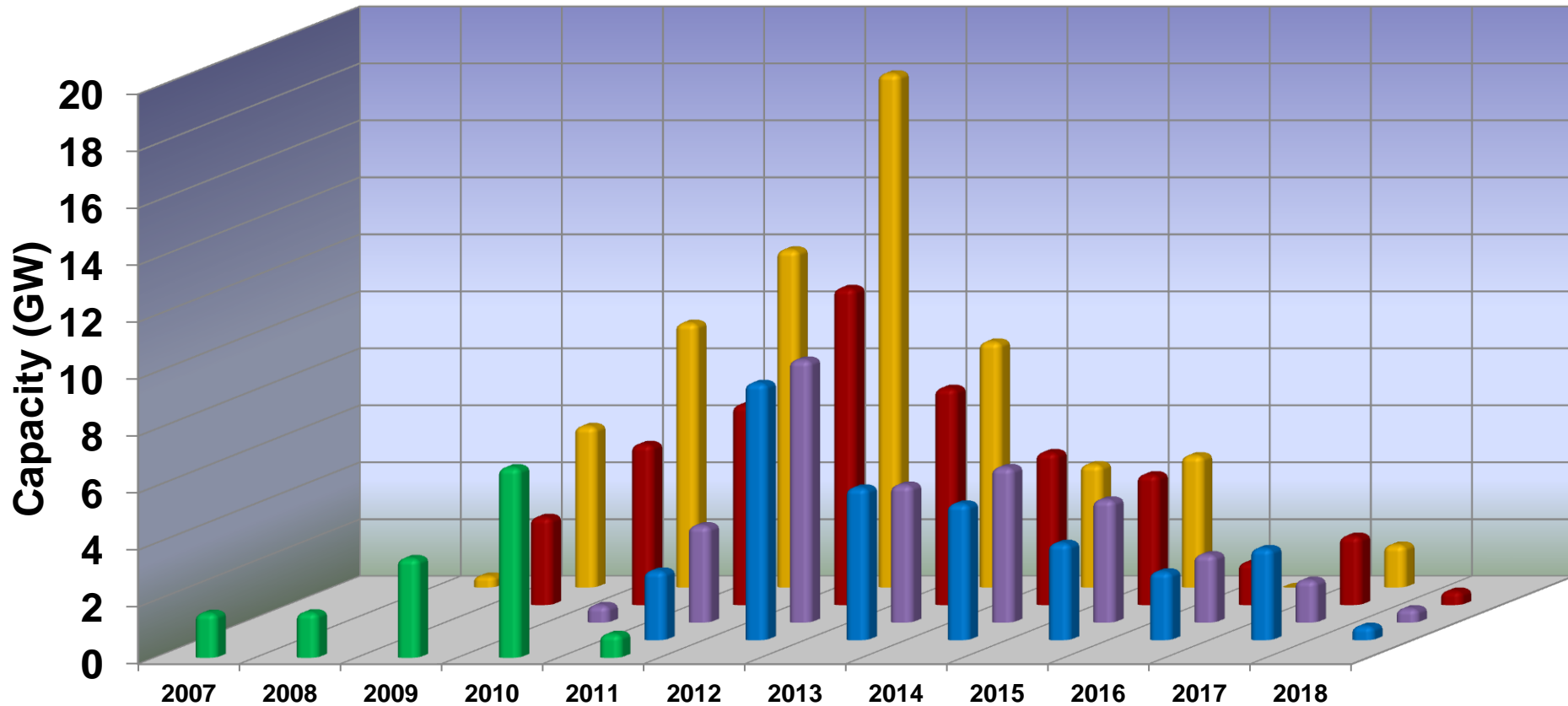


Actual capacity completed has been shown to be significantly less than proposed capacity; the 2002 report listed 11,455 MW of proposed capacity for the year 2005 when only 329 MW were constructed.

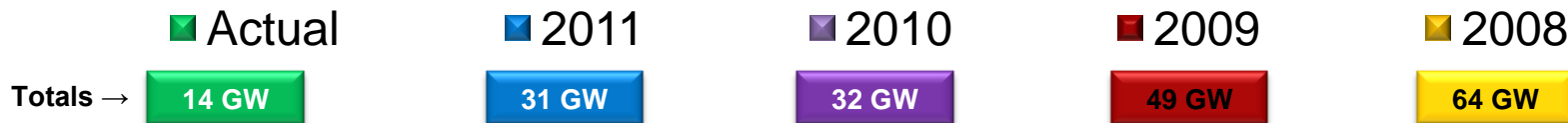
■ Actual
 ■ 2002 Report
 ■ 2005 Report
 ■ 2007 Report
 ■ 2011 Report

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>		Dec 2010	Jul 2011	<i>Net Change</i>	Dec 2010	Jul 2011	<i>Net Change</i>
Progressing Projects	<i>Under Construction</i>	12	11	-1	7,619	7,384	-235
	<i>Near Construction</i>	1	1	0	320	320	0
	<i>Permitted</i>	8	11	+3	6,446	9,621	+3,175
	SUB TOTAL	21	23	+2	14,385	17,325	2,900
Uncertain Potential and Timing	<i>Announced (early stages of development)</i>	36	30	-6	17,385	13,844	-3,541
	TOTAL	57	53	-4	32,259	31,168	-1,091
	Commissioned this Period	-	2	+2	-	835	+835
TOTAL Progressing and Commissioned			25	+4		18,160	+3,735

<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 12/13/2010 and 7/12/2011

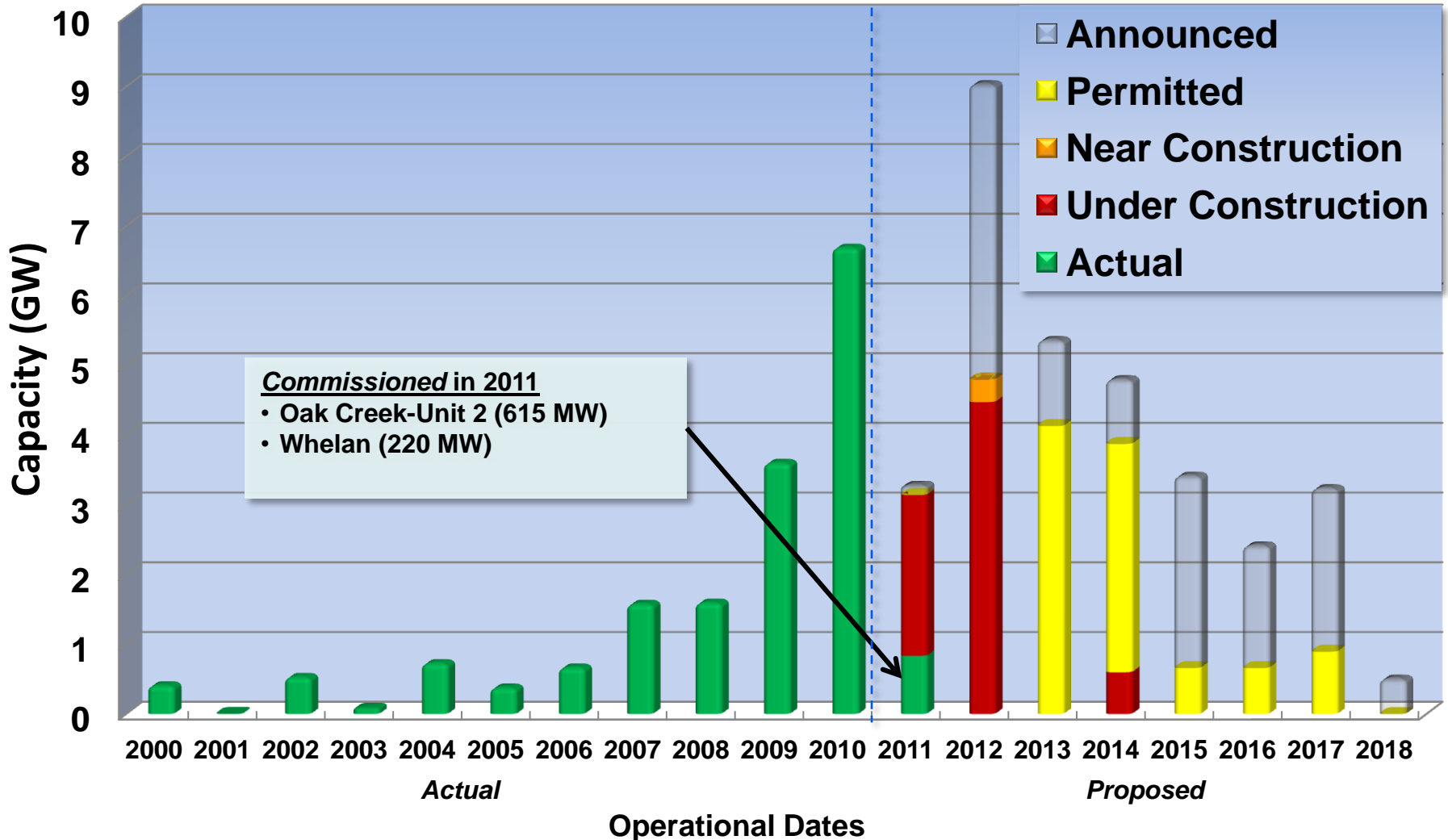
Current Capacity Additions by Years

Refer to Table 1

- Table 1 reflects the current status of coal-fired plant development activity as of July 12, 2011 (*December 13, 2010 through July 12, 2011*)
- “*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
- 835 MW (3 plants) have become operational during the 1st half of 2011 as of July 2011
- There has been a net increase of 3,735 MW (+26%) of total *Progressing and/or Commissioned* projects through 2011 over *Progressing* projects in December (largely due to 8 units moving from Announced to Permitted)

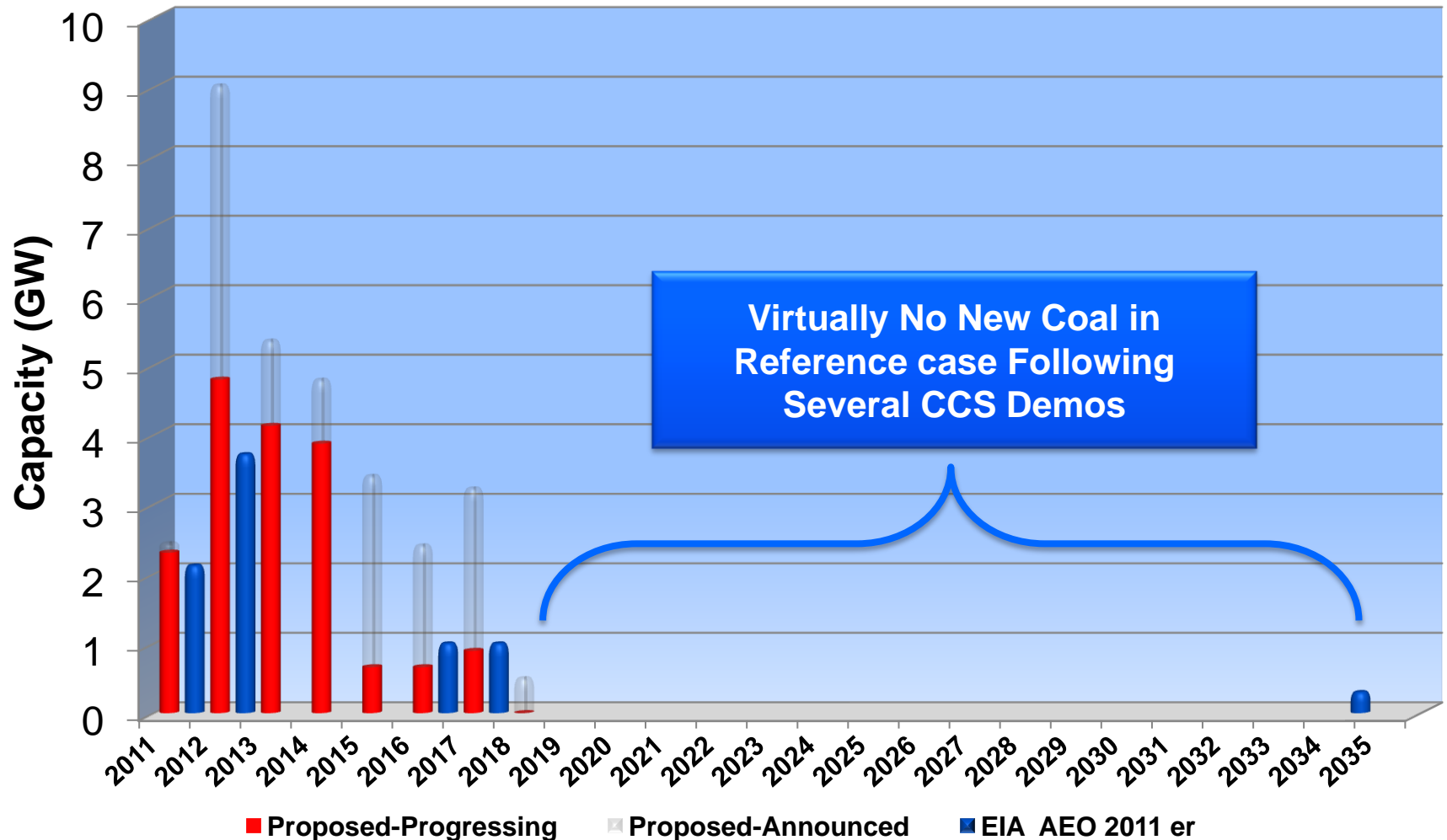
Current Coal Capacity Additions by Years

Figure 2



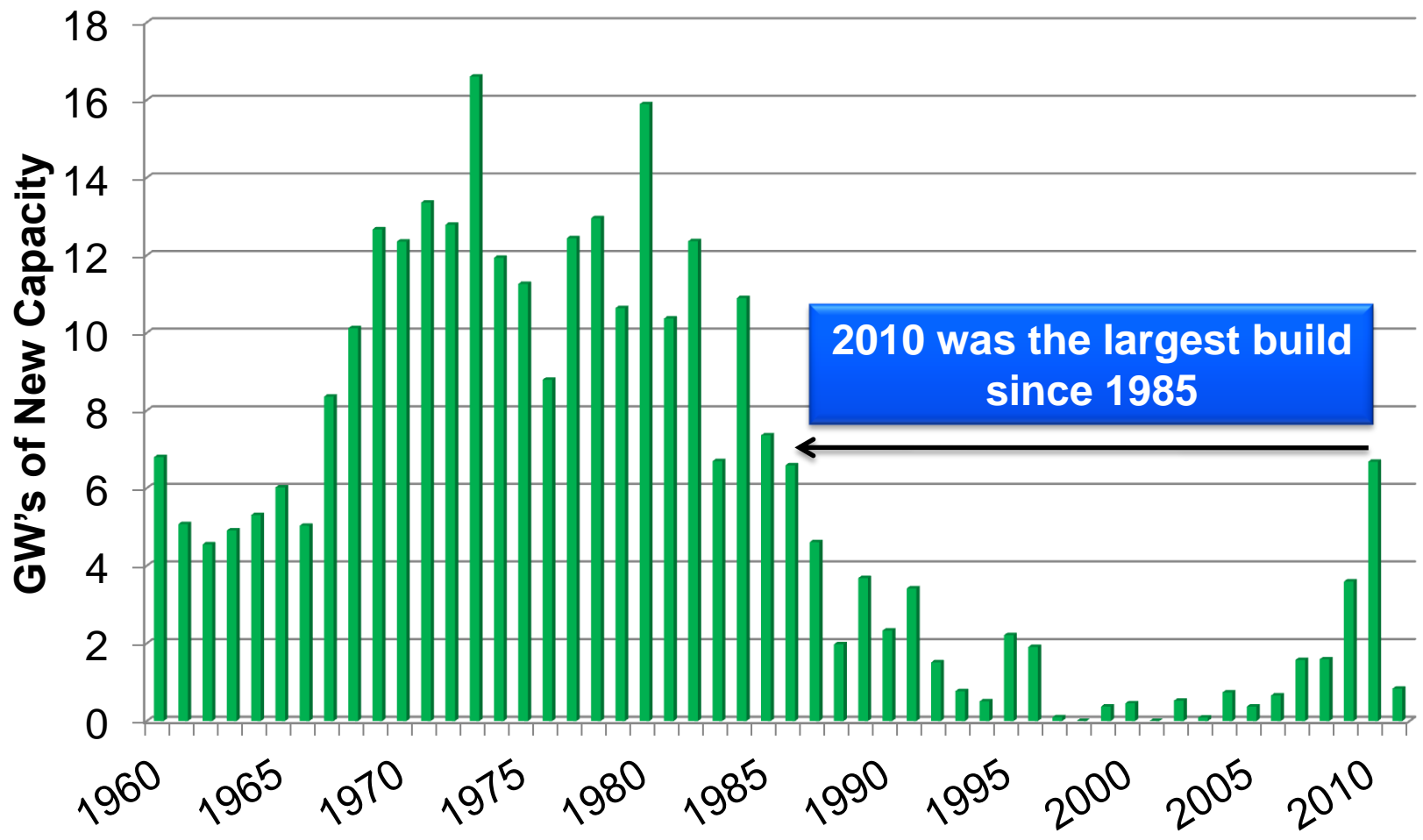
Currently Proposed and Forecasted Coal-Fired Capacity

Figure 3



Last 50 Years of New Coal Capacity

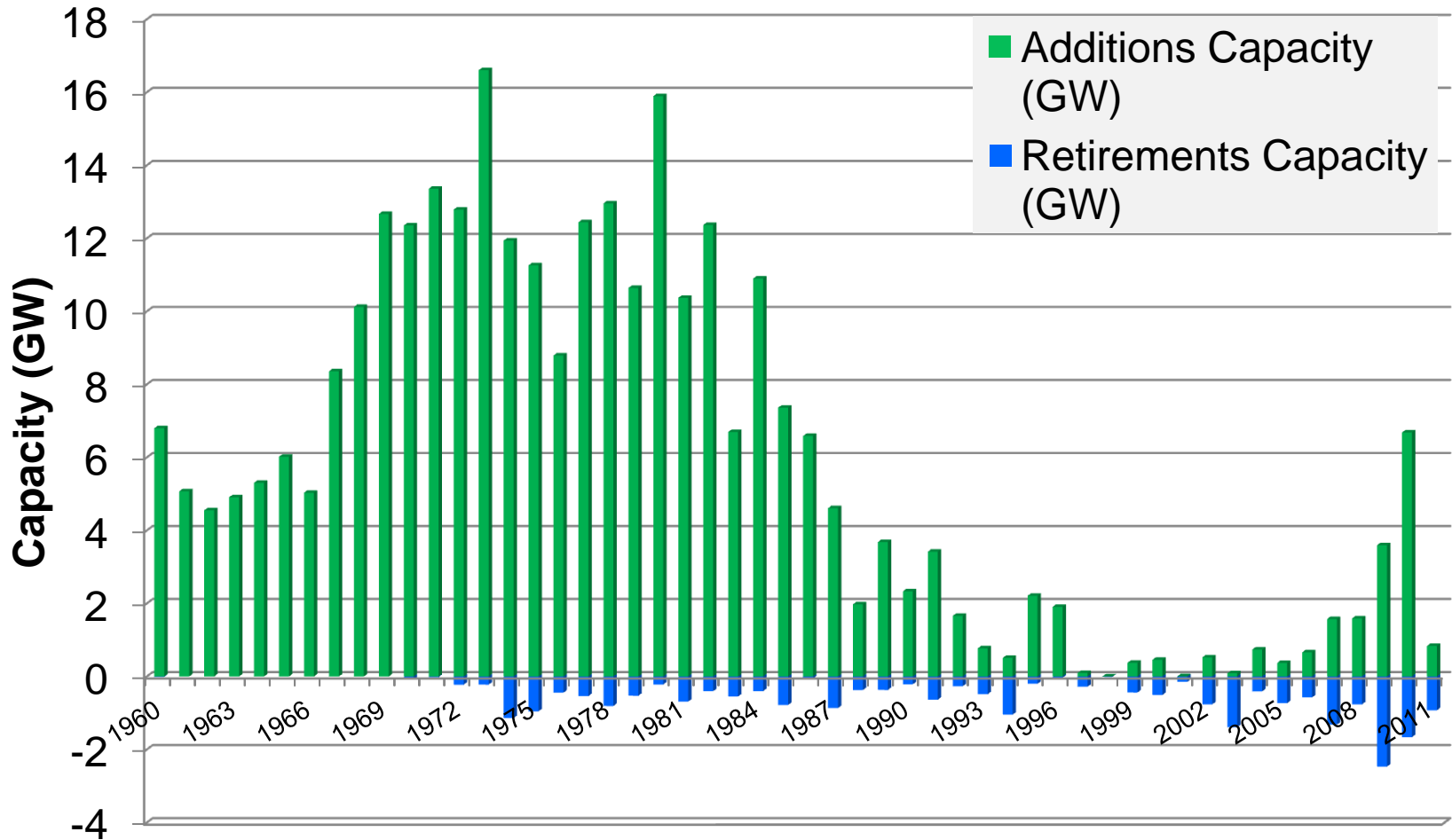
Figure 4



2010 was the largest build since 1985

Last 50 Years of New Coal Capacity

Figure 4b



Proposed Technologies of New Plants

(with Annual change)

Figure 6

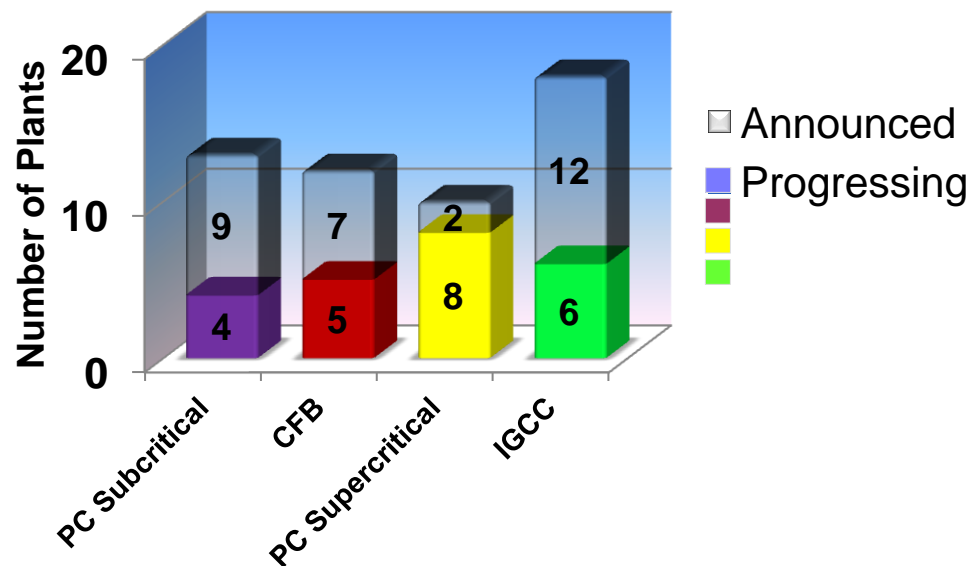
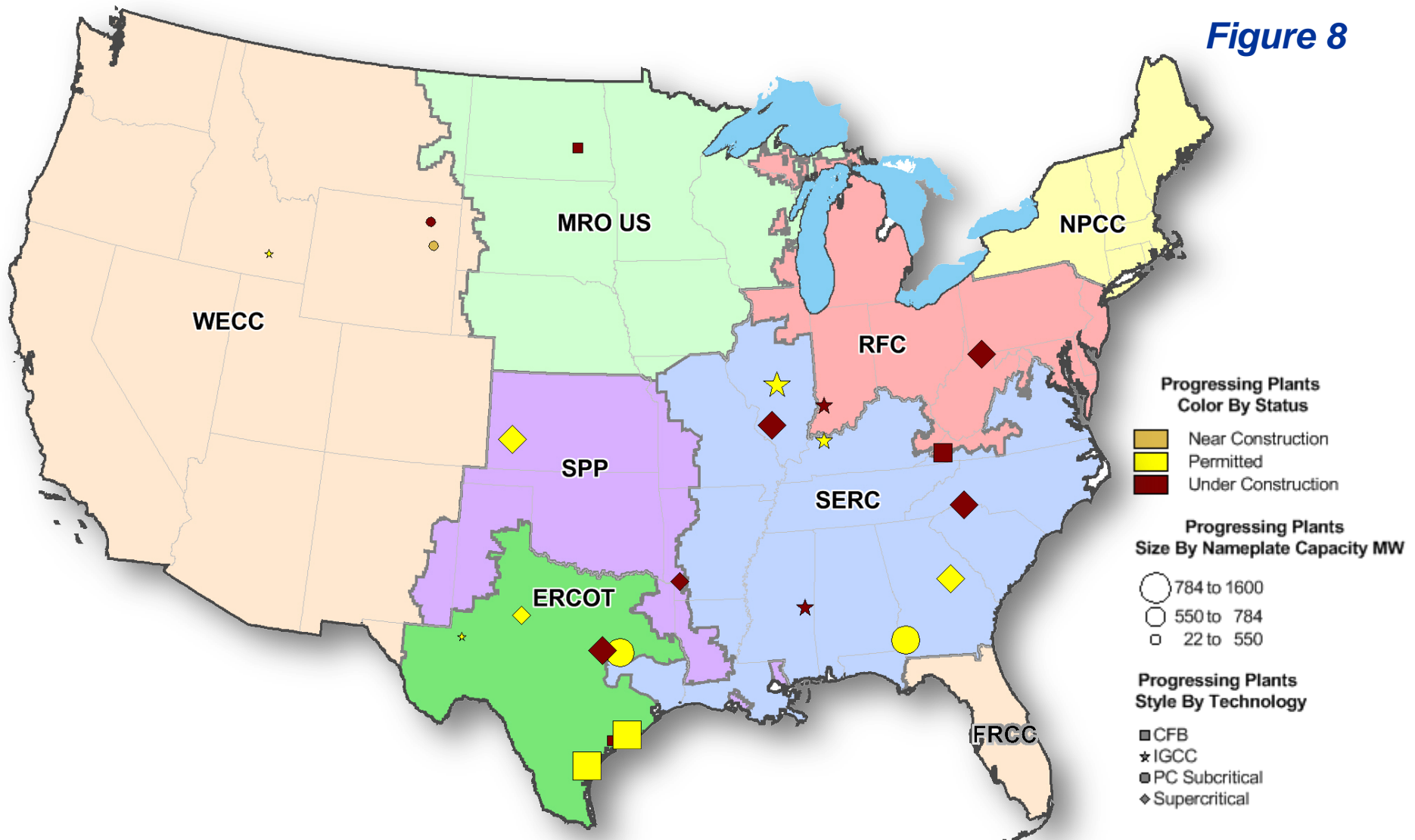


Table 2

Technology Listings	Operational (Since 2000)	Progressing (Permitted, Near-, and Under Construction)		Announced		Total Proposed	
		December 2010	Jul 2011 (Change)	December 2010	Jul 2011 (Change)	December 2010	Jul 2011 (Change)
PC Subcritical	31	5	4 (-1)	10	9 (-1)	15	13 (-2)
CFB	12	4	5 (+1)	9	7 (-2)	13	12 (-1)
PC Supercritical	7	7	8 (+1)	4	2 (-2)	11	10 (-1)
IGCC	1	5	6 (+1)	13	12 (-1)	18	18 (0)

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

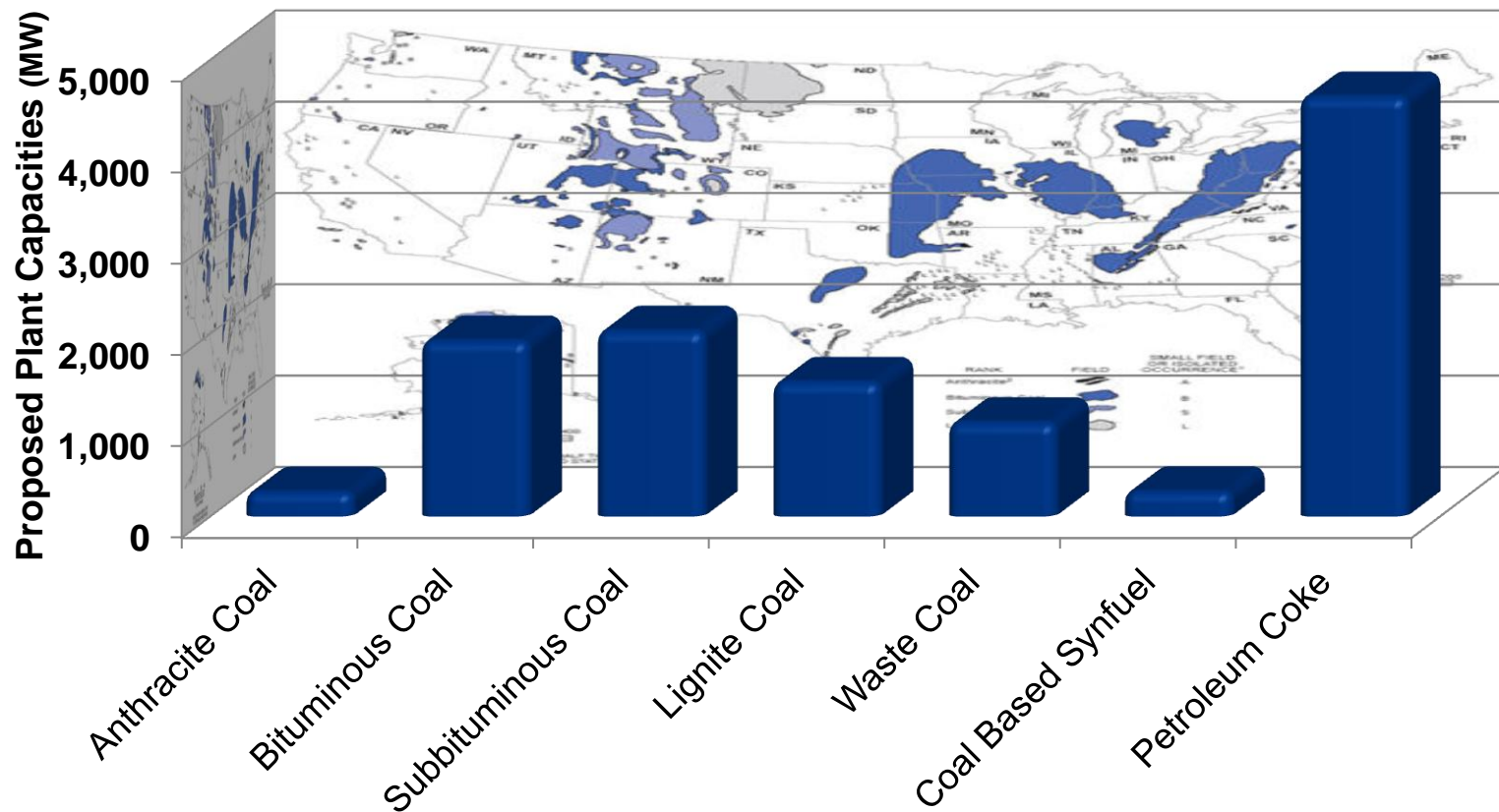
Figure 8



Specified Coal Ranks

All Proposed Plants

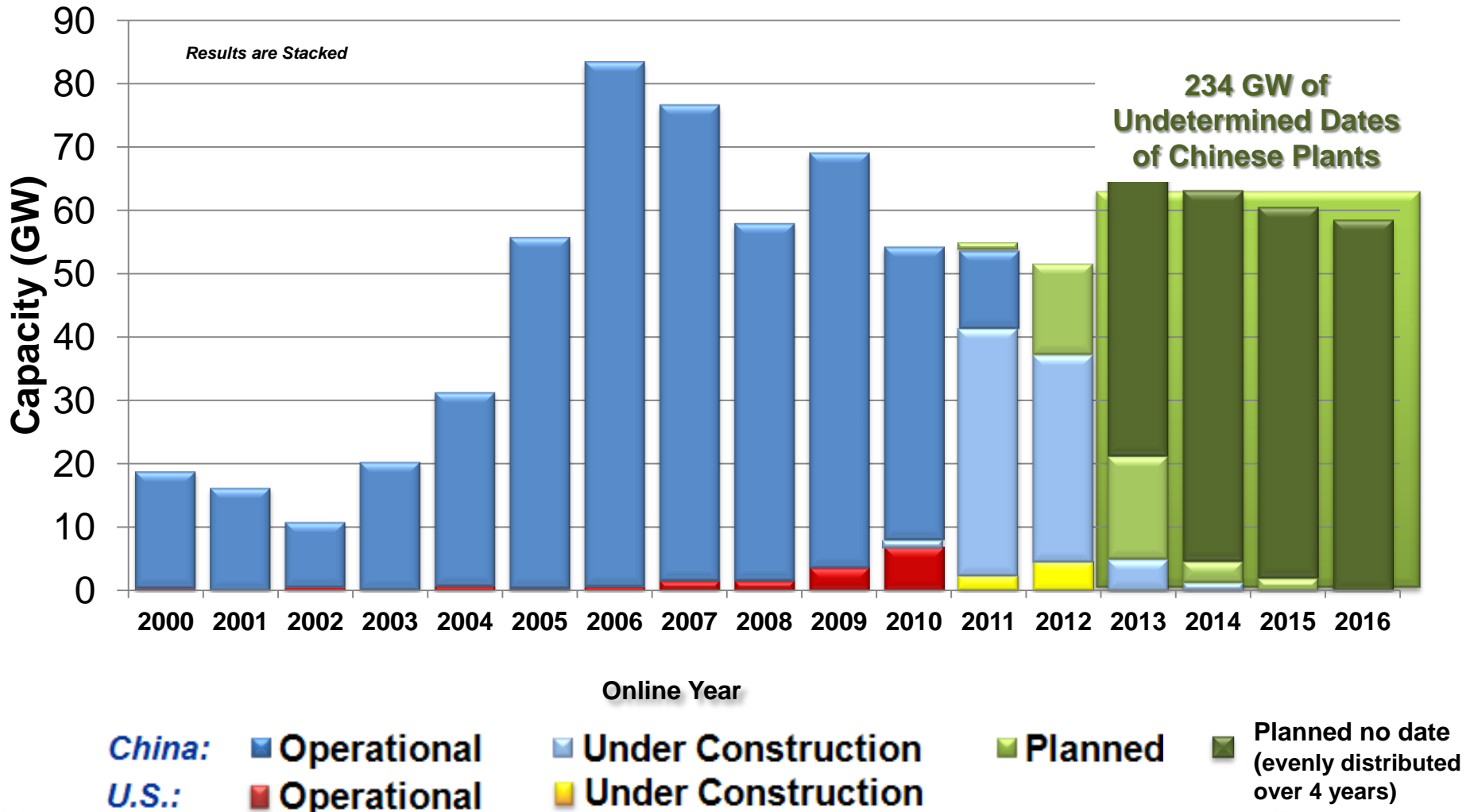
Figure 9



19,559 MW "Generic Coal"
not shown on chart

Coal-Fired Build Rate China and United States

Figure 10



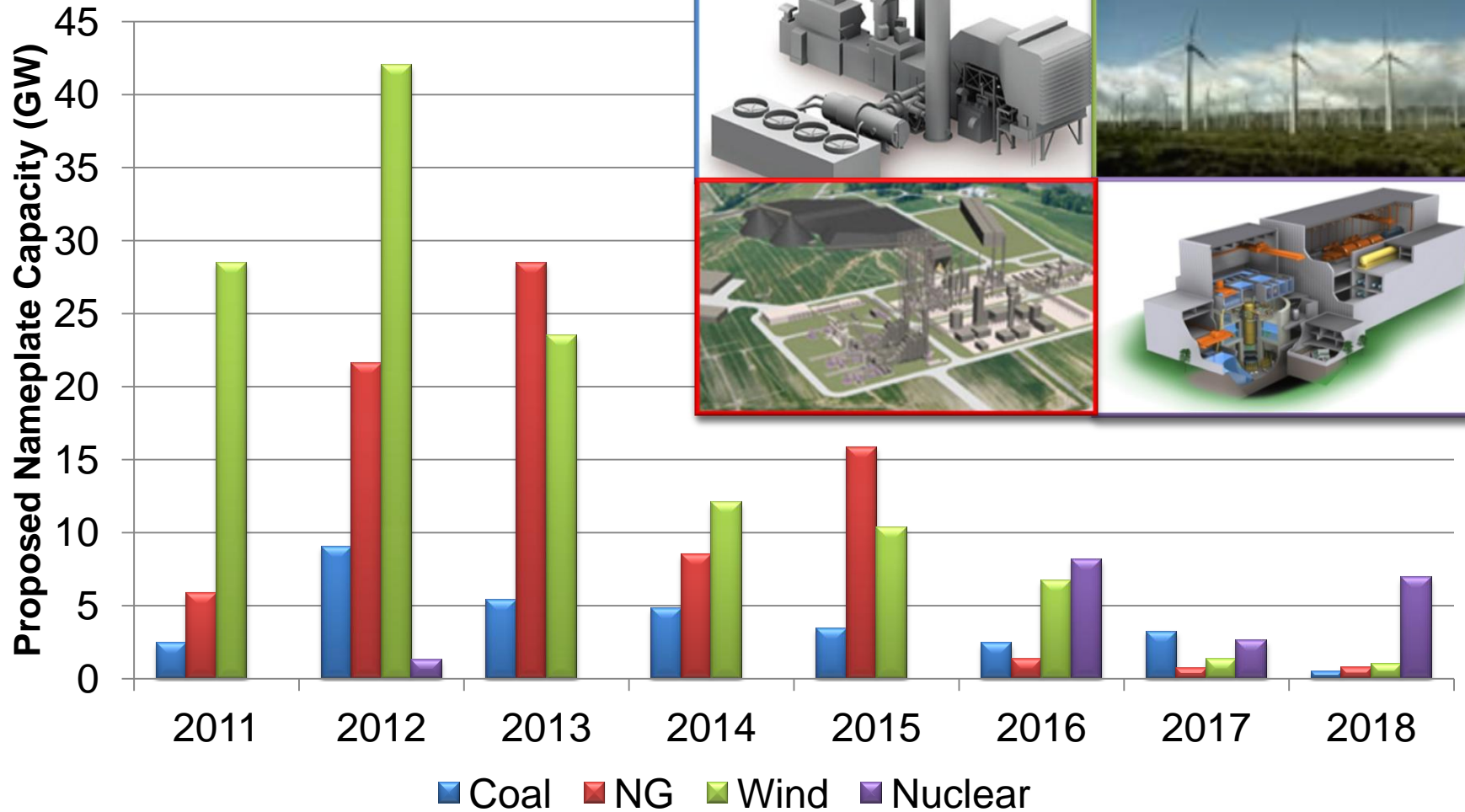
Source: USA data - Ventyx - Velocity Suite (7/12/2011)

China data - Platts - UDI WEPPDB June 2011

Other Generation Development Activity

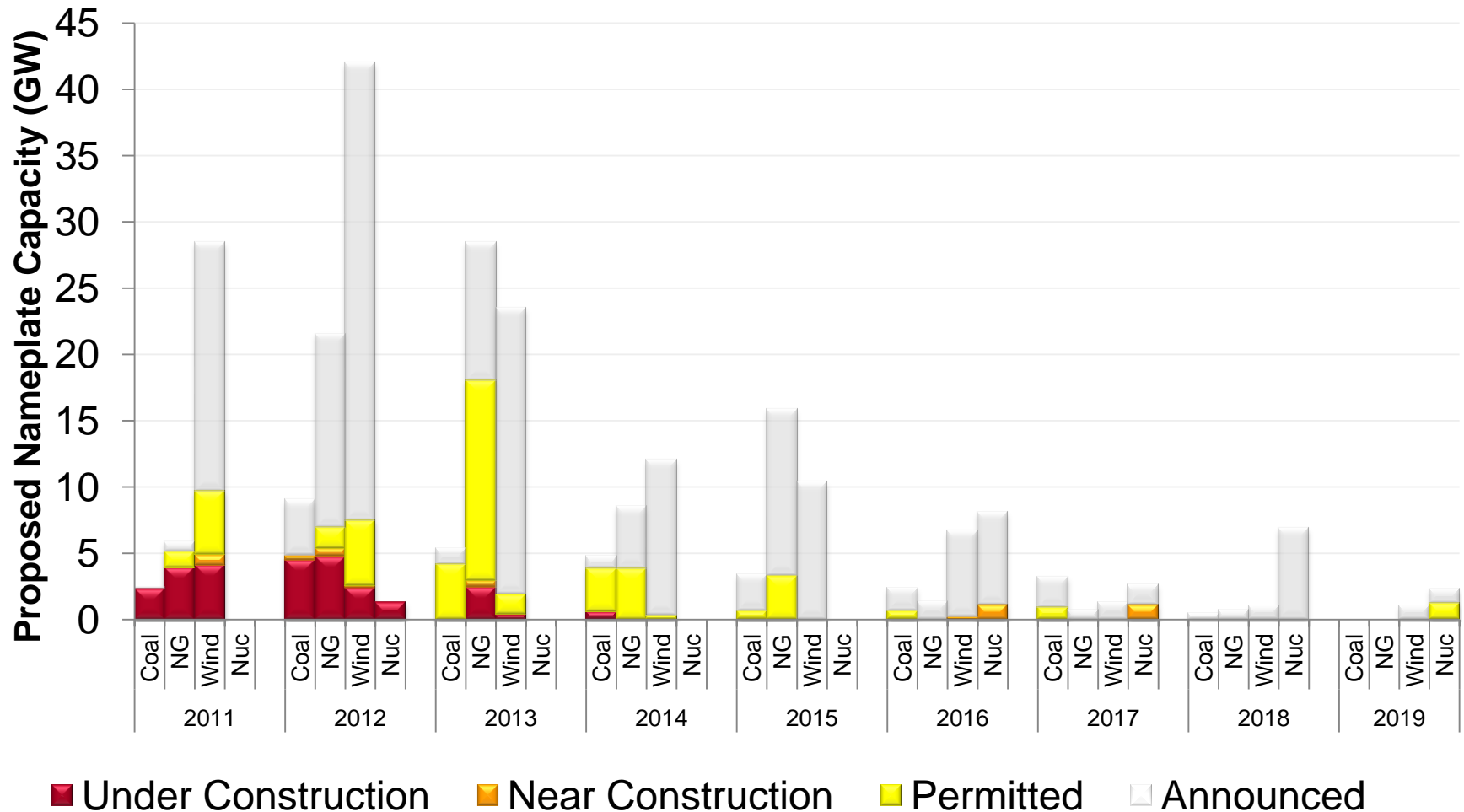
Proposed U.S. New Capacity Coal, Natural Gas, Wind, and Nuclear

Figure 12



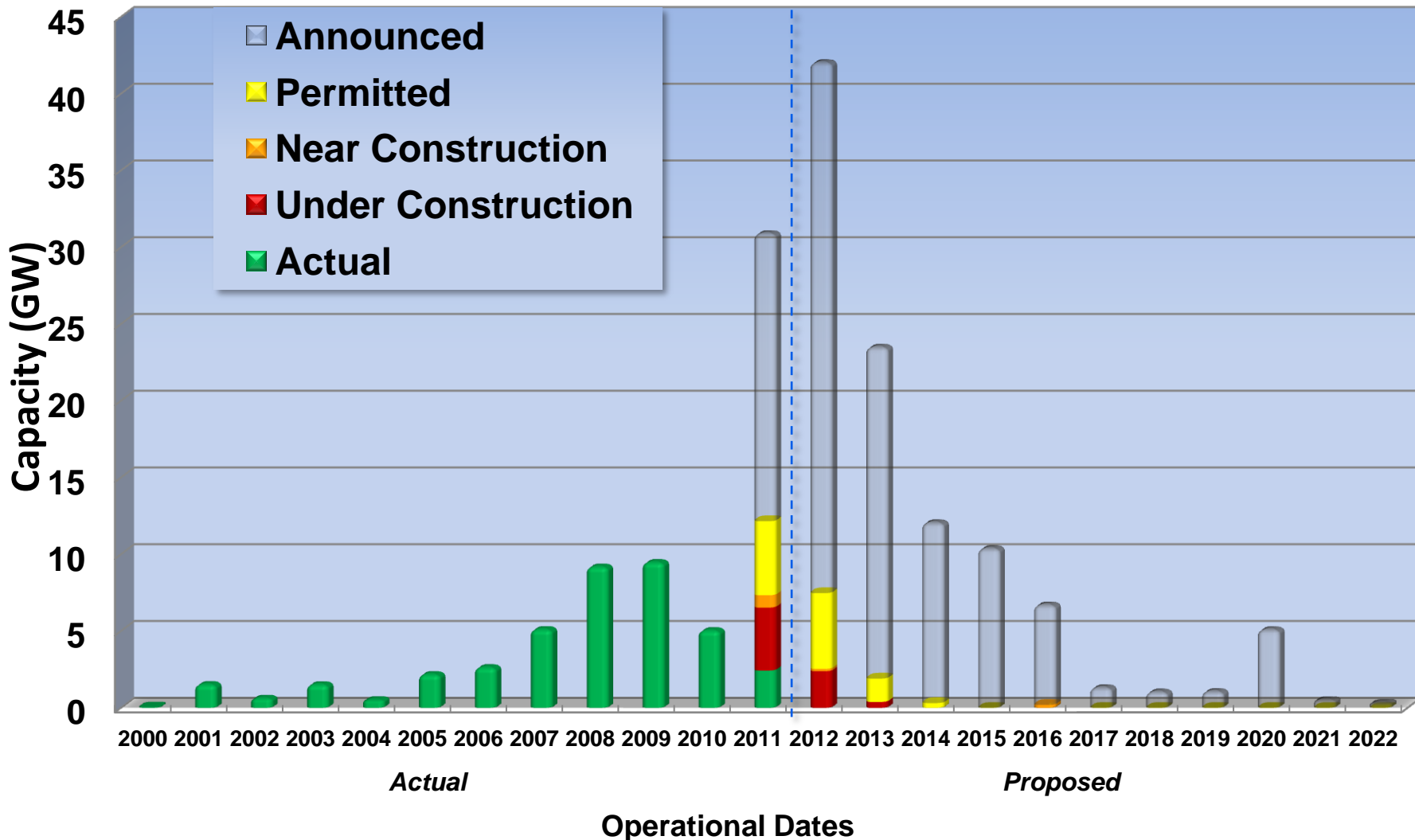
Status of Proposed New U.S. Capacity

Figure 13 Coal, Natural Gas, Wind, and Nuclear



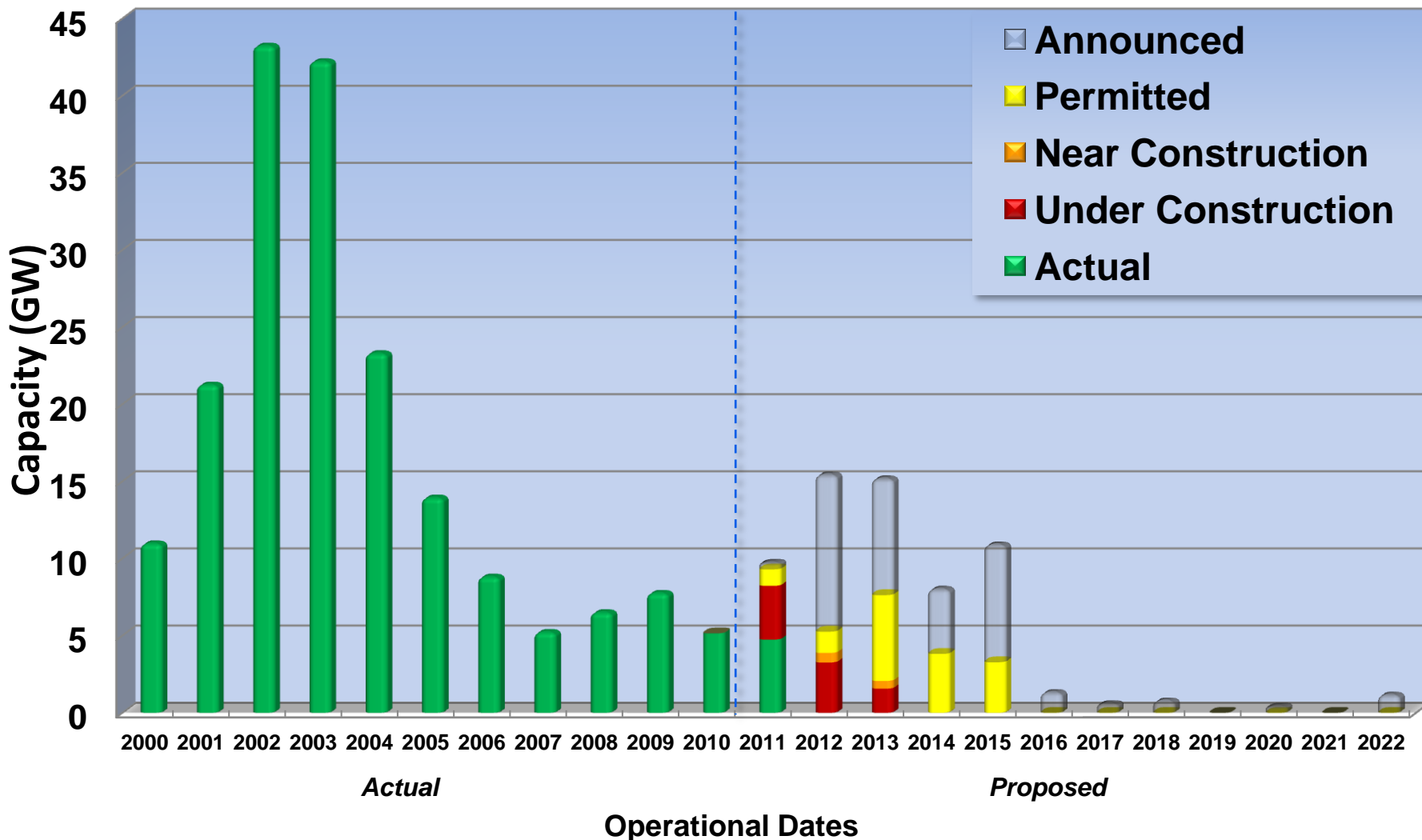
Current Wind Capacity Additions by Years

Figure 14



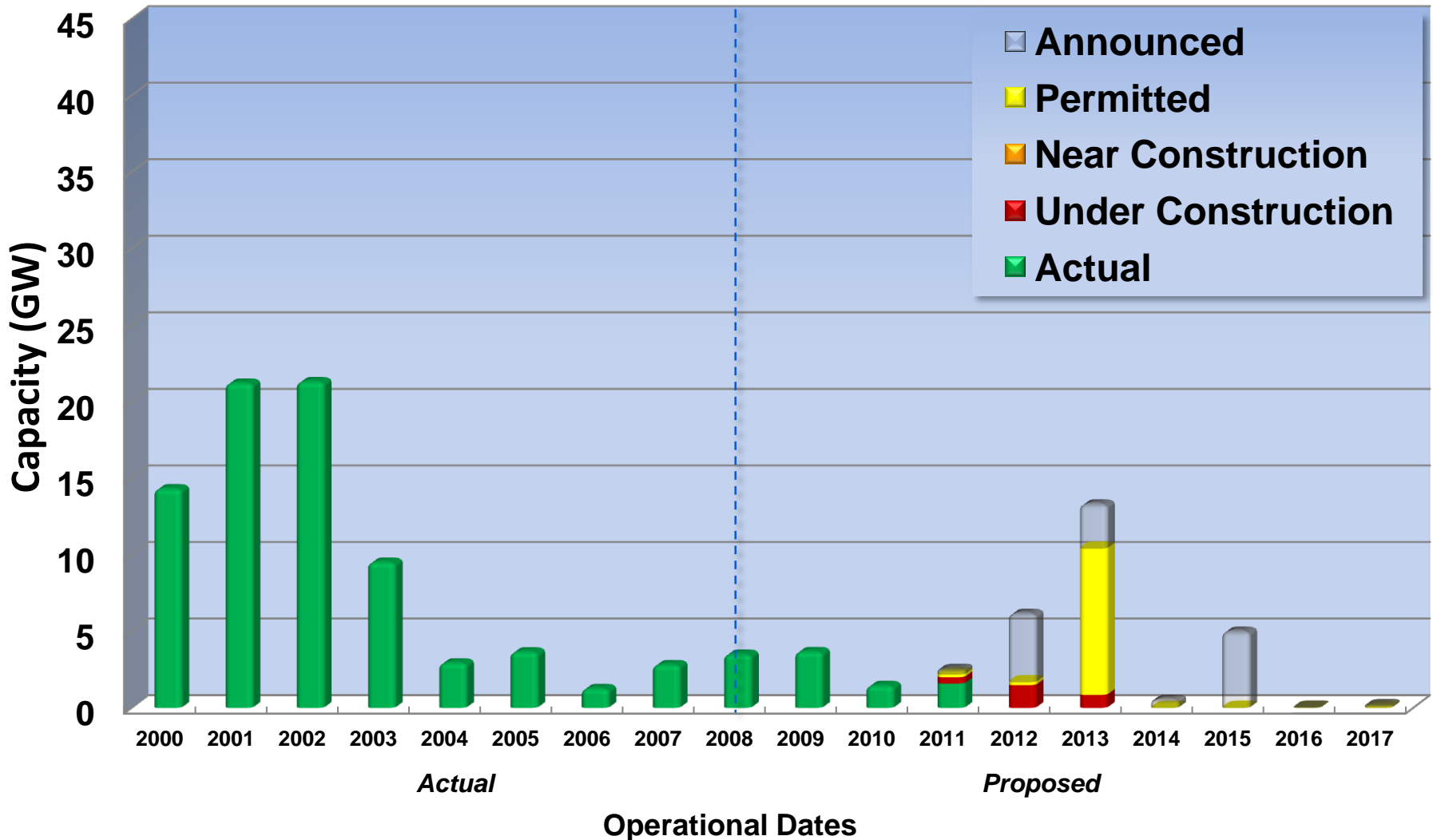
Current NGCC Capacity Additions by Years

Figure 15



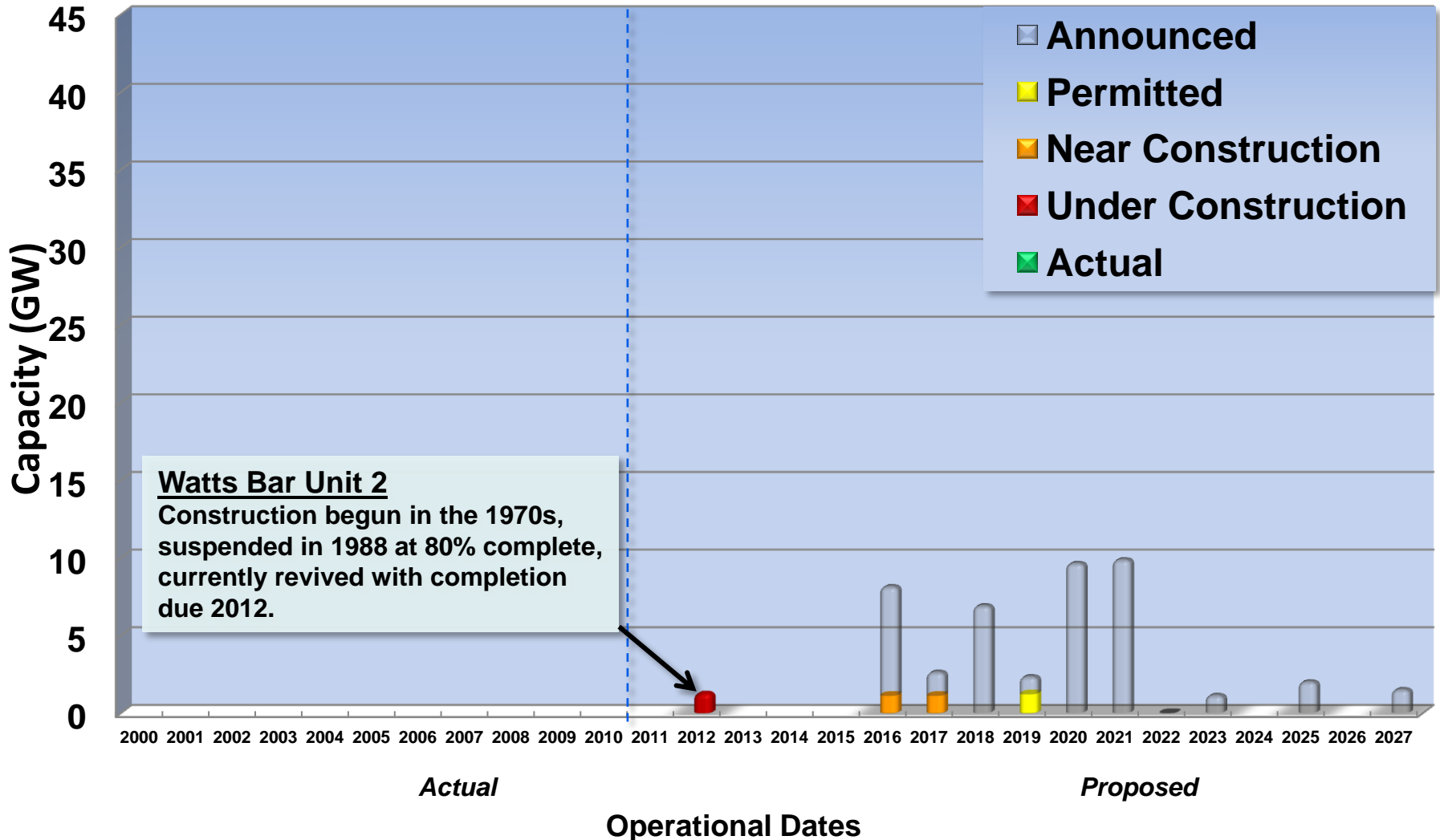
Current NG-GT Capacity Additions by Years

Figure 16



Current Nuclear Capacity Additions by Years

Figure 17



U.S. Coal-Fired Power Plant Summary – 1st half 2011

12/13/2010 – 7/12/2011

- **Two new coal-plants totaling 835 MW were *Commissioned* in the first half of 2011**
- ***Progressing/Commissioned* projects by July 2011 have had a net increase of 4 plants; a net change in capacity of 3,735 MW (+26%) over *Progressing* projects in December 2010**
- **175 MW of new capacity has been *Announced* and 430 MW have been canceled**
 - Of 430 MW canceled plants, 71% were *Announced* phase and 29% were *Progressing*
- **Compared to previous years, fewer projects are being *Announced* to offset recent *Commissioning***