

# GHG Tailoring Rule Update

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# Tailoring Rule Update

- Tailoring Rule Proposal
- CIBO & Other Advocacy
  - Impact Assessment
- Final Rule & Implications

# Advocacy on Issues with GHG Regulation & EPA's Tailoring "Solution"

- Unintended Consequences
- EPA's Solution
- Problems with EPA's Solution
- Solutions

# US EPA's Plan to Regulate GHGs – Unintended Consequences

## EPA's assessment on NSR/PSD:

- 41,000 PSD permits vs 280 per year
- \$250 Million/year cost for resources

## EPA's assessment of Title V Implications:

- 6.1 MILLION new Title V permits vs 15,000
- \$15 BILLION in new costs for permits

# What is the problem with the CAA?

## NSR/PSD

- Covers all pollutants “subject to regulation” under the CAA
  - 100/250 TPY is the highest threshold allowed
  - Very small source: < 0.5 MMBTU/HR
  - Regulation is on a Potential to Emit basis
- PSD Permit: complex, costly and slow!
  - Costs over \$200,000 to get one
  - 18 months after submittal to get permit
  - Can't begin construction on change w/o it

## What EPA is doing: Johnson PSD Interpretive Memo

- Johnson PSD Interpretive Memo clarified that reporting GHGs doesn't make GHGs "Subject to Regulation"
- EPA's reconsideration proposal solicited comment on WHEN GHGs become subject to regulation.
  - EPA recommended 5 31 10
  - Others recommended GHG become subject to regulation when GHG emissions are actually controlled
    - between 1/2/2011 and 3/30/2013

EPA decided when GHG become regulated – BY 1 2 2011

# What EPA is doing: Proposed GHG PSD “Tailoring Rule”

EPA Proposed:

Temporarily:

- Raise PSD & Title V Major Source threshold to 25,000 tons CO<sub>2</sub>e
- Raise PSD Significance Threshold to 10,000 – 25,000 tons CO<sub>2</sub>e

Over next 5 years:

- Investigate streamlining options (PTE calculation, presumptive BACT, general permits)
- Lower thresholds to meet the CAA

# What's wrong with EPA's Solution?

- Impact on Industry
- Impact on State Permitting Agencies
- SIP GAP & Solution Timing
- Solution is temporary (Legal Basis)



# What's wrong with EPA's Proposed Solution?

- Impact on Industry
  - 25,000 TPY is only 47 MMBTU/hr (gas basis)
  - Major Permitting is based on Potential to Emit
  - Virtually all industry becomes Major for Title V and for PSD.
  - EPA's policy & interpretation – if major for one pollutant, major for all.
  - Transforms State construction permits for Conventional Pollutants into Federal PSD Construction permits due to GHG PTE

# Most Significant Impact - PSD

## PSD Major Issue – Modifications

Once a site is major for any pollutant, they are major for PSD and subject to significance thresholds for all modifications:

PM – 15/10 TPY

NO<sub>x</sub>, VOC – 40 TPY

GHG – 10,000 (a 19 MMBTU/hr gas boiler)

=> Permit changes that required state minor NSR permits now would require Federal PSD permits.

# Comparison of Sites affected by GHG Reporting Rule to Tailoring Rule

## Industry Example

### GHG Reporting Rule

25,000 tonne threshold

- Based on Actual Emissions
- Affects **10** sites ~20%
- 9 of 10 sites already Major
- Reporting only

### PSD Tailoring Rule

25,000 ton threshold

- Based on Potential (PTE)
- Affects 29 sites ~ 65%
- 15 of 29 sites Major Title V
- 9 of 29 sites Major for PSD
- 14 New Title V sites
- **20 New PSD Sites**
- Changes that required Minor NSR would require PSD permits (PM, NO<sub>x</sub>, VOC & GHG)

# Federal PSD vs. State Permitting

## A Real Big Deal

“Under PSD, once a source is determined to be major for any regulated pollutant, a BACT review is performed for each attainment pollutant whose emissions exceed its PSD significance level as part of a new construction or modification project at the source. ***In addition to performing a BACT review, the source must analyze the impact of the project on ambient air quality to assure that no violations of any NAAQS or PSD increments will result and must analyze impacts on soil, vegetation and visibility. Sources or modifications that would impact Class 1 areas (e.g. national parks) may be subject to additional requirements....*** There are currently no NAAQS or PSD increments established for GHGs and therefore these PSD requirements would not apply to GHG emission sources, even when PSD is triggered for GHG emission sources. ***However, as noted previously, if PSD is triggered for a GHG emissions source, all regulated NSR pollutants which the new source emits in significant amounts would be subject to PSD requirements. Therefore, if a facility triggers review of regulated NSR pollutants that are non-GHG pollutants for which there are NAAQS or increments, the air quality, additional impacts and Class I requirements would apply to those pollutants.***”

# Assessment of Tailoring Rule Impact

	Title V	GHG RPT Rule	Actual GHG Emissions Metric Tons	Potential GHG Emissions Short Tons
<b>Existing Title V SITES</b>				
Tech Site A	Yes	No	17,534	126,213
Site A	Yes	No	22,514	71,873
Site B	Yes	No	19,248	95,291
Site C	yes	Yes	50,074	252,269
Site D	Yes	Yes	367,474	881,390
Site E	Yes	Yes	281,663	611,083
Site F	Yes	Yes	556,252	615,816
Site G	Yes	Yes	245,438	255,372
Site H	Yes	Yes	188,383	536,407
<b>NEW PSD SITES</b>				
Site I	No	Yes	29,344	100,918
Site J	No	No	16,998	50,675
Site K	No	No	16,546	45,163
Site L	No	No	1,594	88,118
Site M	No	No	12,000	41,061
Site N	No	No	14,662	41,019
Site O	No	No	13,407	76,254
Site P	No	No	5,935	41,608
Site Q	No	No	13,171	55,281
Tech Site B	No	No	14,249	55,281
Site P	No	No	9,959	44,595
Tech Site C	No	No	9,210	33,825
Tech Site D	No	No	2,074	29,534
Tech Site E	No	No	4,926	55,155

# What's wrong with EPA's Solution?

- Permit Workload on States

- Short-term workload doubles per US EPA
  - Title V - 13,661 New Sources & Permits
  - PSD - 13,661 New Facilities subject for modifications
    - PSD Permits increase from 280 to 400/yr
  - SIP Changes needed to increase thresholds to 25,000
- Problems:
  - EPA has under-estimated the number of facilities affected (lack PTE or combustion info).
    - All facilities with > 47 MMBTU/hr (gas) MAJOR
  - EPA has not adequately considered the number of modifications for conventional pollutants at existing facilities (transforming state to federal permits)
- Long-term: States must process 41,000 PSD permits per year and 6.1 Million Title V permits

# What's wrong with EPA's Solution?

## SIP Problem:

- Most EPA-Approved PSD SIPs (delegated states)
  - Apply to “regulated pollutants” or pollutants “subject to regulation”
  - Establish PSD permit thresholds at 100/250 TPY w/
    - Significance level for newly covered pollutants are Zero or
    - Have significance levels above Zero up to permit thresholds
  - Presumption - all of these SIPs would interpret their regulations to immediately cover GHGs
- Problem – Changing State SIPs to increase threshold to Tailoring levels will take 2 years
- EPA will make GHG “Regulated Pollutants” before then!
- What happens as EPA decreases thresholds?

# PSD Tailoring Rule - Issues

## Tailoring is Temporary Fix and does little

- EPA must reduce thresholds to meet CAA eventually affecting all sites
- States need to quickly change SIPs for it to help at all

## PSD vs. State Permitting is a big issue

- With current CAA interpretation, all sites become subject to PSD for minor increases in conventional pollutants.
- EPA must adopt a different CAA interpretation to avoid this. (unlikely) or EPA could change PSD policy



# GHG Regulation – Better Solutions!

## Preliminary Assessment:

- Difference between Actual and PTE huge
- Need > 100,000 Threshold – PTE difference

## Steps EPA may take that would help:

- Delay Date GHGs become Subject to Reg
- Increase PSD threshold to 100,000 TPY
- Without legislative fix, this is a short-term fix

## Best alternative - limit PSD/Title V to sites already subject – Permanent Fix!

- Alternative interpretation of CAA
- Revise PSD Policy

# PSD Tailoring Rule – What we need.

## Steps EPA should take:

- Delay Date GHGs become Subject **till 2012** Reg through Johnson Memo (**Final Rule – Delay till 7/2011** for most sources)

## Next, EPA should:

- limit PSD/Title V to sites already subject:
  - Suggested in Tailoring Rule but proposed based on “administrative necessity” legal basis.
    - EPA can do this on firm legal footing by adopting an alternative interpretation of PSD applicability under the CAA – EPA would need to provide notice and comment on change
    - Alternatively, EPA COULD REVISE existing Policy for PSD applicability to match that in NNSR (if you are major for one pollutant you are NOT major for PSD for all pollutants)
- IF EPA refuses to change interpretation, **EPA must increase PSD threshold to 100,000 TPY. State SIPs solution need to be changed.**

**Problem:** Threshold is is temporary solution - it doesn't square with the CAA.

- EPA CAN STILL CHANGE THEIR POLICY BUT NOT YET PERSUADED

# Final Tailoring Rule

## Initial Threshold (through 1/2013):

- 100,000 TPY CO<sub>2</sub>e Major Source Threshold –
- 75,000 TPY CO<sub>2</sub>e GHG PSD Significance Threshold

## Timing

### Jan 2, 2011 to June 30 2011

- Only applicable to sources subject to PSD or Title V for a conventional pollutant (not GHGs)

### June 30 2011

- Applicable to sources above thresholds for GHGs even if not Major

n.b. Permit complete by dates or include GHG

## Step 2. (July 1, 2011 to June 30, 2013)

- 100,000 tpy CO<sub>2</sub>e threshold makes a site Major for PSD and Title V
  - PSD will apply if the modification increases GHG emissions by at least 75,000 tpy even if they do not significantly increase emissions of any other pollutant.
  - Apply for Title V permit due to GHG within 1 year of being subject.
- Get limit on PTE for CO<sub>2</sub>e to avoid impacts!

## Phase 2 Impact

- Impact (per EPA)
  - 550 sources will need title V permits because of their GHG emissions.
  - 900 additional PSD permits/year triggered by increases in GHG emissions from new and modified emission sources.
- EPA DID NOT ESTIMATE PSD PERMITS TRIGGERED FOR CONVENTIONAL POLLUTANTS at FACILITIES THAT BECOME MAJOR FOR GHG EMISSIONS

# Additional Steps by EPA Planned

## Rulemaking in 2011 – complete by July 1, 2012

- Additional steps for phasing in GHG permitting to smaller sources
  - Streamlining Steps Proposed
  - Can some small sources can be permanently exempted?

## Step 3:

January 2013 - could regulate 50,000 TPY sources

## Step 4?

April 30, 2016 – could regulate smaller sources.

# Implementation

- Defines “subject to regulation”
  - States can interpret term as feds do to avoid SIP change requirements
  - EPA asks states to advise EPA if they must make rule changes to implement the new GHG emissions thresholds, and when such changes will be adopted.
  - If this cannot happen by January 2, 2011, EPA will “take appropriate action”

# Impact of Influence Work Proposed vs. Final Tailoring Rule

## Proposal:

- 25,000 PTE Major Source with 10,000 Sign. Threshold
  - Effective 5/31/2010
- Threshold lowered 3 – 5 years
- All States must revise SIPs

## P&G Impact:

- All states must immediately adopt SIP changes for tailoring rule or all P&G sites Major.

## With adoption:

- Title V Sites inc. from 15 to 29
  - 14 New Title V Sites
- PSD Sites inc from 9 to 29
  - 20 New PSD Sites

## Final Rule:

- 100,000 PTE Major Source with 75,000 Sign. Threshold
  - Effective 7/1/2011
  - Effective 1/2/2011 (“anyway sources”)
  - 7/1/2013 EPA may reduce threshold to 50,000 PTE
  - April 2016 – EPA may further reduce threshold
- Most states can change their rule interpretation without SIP rev.

## P&G Impact:

- 3 New PSD Sites
- 2 New Title V Sites
- 6 More PSD/Title V Sites by 2013
- Proactive permitting to avoid impact



# Subject to Regulation 52.21 (b) (ii)

- 49) [Reserved] Subject to regulation means, for any air pollutant, that the pollutant is subject to either a provision in the CAA or a nationally-applicable regulation codified by the Administrator in subchapter C of this chapter, that requires actual control of the quantity of emissions of that pollutant, and that such a control requirement has taken effect and is operative to control, limit or restrict the quantity of emissions of that pollutant released from the regulated activity. Except that:
- Greenhouse gases (GHGs), the air pollutant defined in 86.1818-12 (a) of this chapter as the aggregate group of six greenhouse gases: carbon dioxide, nitrous oxide, methane, hydrofluorocarbons, perfluorocarbons and sulfur hexafluoride, shall not be subject to regulation except as provided in paragraphs (b) (49) (iv) through (v) of this section
  - For purposes of paragraphs (b) 48 (iii) through (v) of this section, the term tpy CO2 equivalent emissions (CO2e) shall represent an amount of GHGs emitted and shall be computed as follows:
    - Multiplying the mass amount of emissions (tpy), for each of the six greenhouse gases in the pollutant GHGs, by the gas's associated global warming potential published at Table A-1 to subpart A of part 98 of this chapter – Global Warming Potentials
    - Sum the resultant value from paragraph (b) (49) (ii) (a) of this section for each gas to compute a tpy CO2e.
  - The term emission increase as used in paragraphs (b) (49) (iv) through (v) of this section shall mean that both a significant emission increase (as calculated using the procedures in (a) (2) (iv) of this section) and a significant net emissions increase as defined in paragraphs (b) (3) and (b) (23) of this section) occur. For the pollutant GHGs, an emissions increase shall be based on tpy CO2e, and shall be calculated assuming the pollutant GHGs is a regulated NSR pollutant, and “significant” is defined as 75,000 tpy CO2e instead of applying the value in paragraph (b) (23) (ii) of this section.
  - Beginning January 2, 2011, the pollutant GHGs is subject to regulation if:
    - The stationary source is a new major stationary source for a regulated NSR pollutant that is not GHGs and also will emit or have the potential to emit 75,000 tpy CO2e or more; or
    - The stationary source is an existing major stationary source for a regulated NSR pollutant that is not GHGs, and also will have an emissions increase of a regulated NSR pollutant and an emissions increase of 75,000 tpy CO2e or more; and,
  - Beginning July 1, 2011, in addition to the provisions in paragraph (b) (49)(iv) of this section, the pollutant GHGs shall also be subject to regulation:
    - At a new stationary source that will emit or have the potential to emit 100,000 tpy CO2e; or
    - At an existing stationary source that emits or has the potential to emit 100,000 tpy CO2e, when such stationary source undertakes a physical change or change in the method of operation that will result in an emissions increase of 75,000 tpy CO2e or more

# *Regulated NSR pollutant*

- (50) *Regulated NSR pollutant*, for purposes of this section, means the following:
- (i) Any pollutant for which a national ambient air quality standard has been promulgated and any pollutant identified under this paragraph (b)(50)(i) as a constituent or precursor for such pollutant. Precursors identified by the Administrator for purposes of NSR are the following:
  - ( a ) Volatile organic compounds and nitrogen oxides are precursors to ozone in all attainment and unclassifiable areas.
  - ( b ) Sulfur dioxide is a precursor to PM<sub>2.5</sub> in all attainment and unclassifiable areas.
  - ( c ) Nitrogen oxides are presumed to be precursors to PM<sub>2.5</sub> in all attainment and unclassifiable areas, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of nitrogen oxides from sources in a specific area are not a significant contributor to that area's ambient PM<sub>2.5</sub> concentrations.
  - ( d ) Volatile organic compounds are presumed not to be precursors to PM<sub>2.5</sub> in any attainment or unclassifiable area, unless the State demonstrates to the Administrator's satisfaction or EPA demonstrates that emissions of volatile organic compounds from sources in a specific area are a significant contributor to that area's ambient PM<sub>2.5</sub> concentrations.
- ***(ii) Any pollutant that is subject to any standard promulgated under section 111 of the Act;***
- (iii) Any Class I or II substance subject to a standard promulgated under or established by title VI of the Act;
- iv. Any pollutant that otherwise is subject to regulation under the Act as defined in paragraph (b) (49) of this section.
- (v) Notwithstanding paragraphs (b) (50) (i) through (iv) of this section, the term regulated NSR pollutant shall not include any or all hazardous air pollutants either listed in section 112 of the act, or added to the list pursuant to section 112 (b) (2) of the Act, and which have not been delisted pursuant to section 112 (b) (3) of the Act, unless a listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.
- ~~(iv) Any pollutant that otherwise is subject to regulation under the Act; except that any or all hazardous air pollutants either listed in section 112 of the Act or added to the list pursuant to section 112(b)(2) of the Act, which have not been delisted pursuant to section 112(b)(3) of the Act, are not regulated NSR pollutants unless the listed hazardous air pollutant is also regulated as a constituent or precursor of a general pollutant listed under section 108 of the Act.~~