Appendix A. GHG Applicability Flow Chart – New Sources
(January 2, 2011, through June 30, 2011)

START

1. Will the permit be issued on or after January 2, 2011 but before July 1, 2011?
   NO
   2. Will the permit be issued on or after July 1, 2011?
      NO
      GHG emissions are not subject to PSD as part of this permit review.
      YES
      See New Source Flow Chart in Appendix B

3. Is this a new stationary source subject to PSD for a regulated NSR pollutant other than GHGs?
   NO
   GHG emissions are not subject to PSD as part of this permit review.
   YES

4. Determine the new source’s potential to emit (PTE) in tons per year (TPY) for each of the 6 GHG pollutants (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆) taking into account enforceable limits.

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5. Calculate the GHG emissions on a CO₂ equivalent (CO₂e) basis using the global warming potential factors applied to the mass of each of the 6 GHG pollutants.

6. Are the potential GHG emissions equal to or greater than 75,000 TPY?

   NO  GHG emissions are not subject to PSD as part of this permit review

   YES  GHG emissions are subject to PSD as part of this permit review

* The mass-based emission threshold of zero TPY has been excluded from this flow chart because any new source that meets the 75,000 TPY CO₂e requirement would automatically exceed that mass based rate.
Appendix B. GHG Applicability Flow Chart – New Sources (On or after July 1, 2011)

START

1. Will the permit be issued on or after July 1, 2011?

   YES

   2. Determine the new source's potential to emit (PTE) in tons per year (TPY) for each of the 6 GHG pollutants (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆) taking into account enforceable limits.

   YES

   3. Calculate the GHG emissions on a CO₂ equivalent (CO₂e) basis using the global warming potential factors applied to the mass of each of the 6 GHG pollutants.

   NO

   4. Are the potential GHG emissions on a CO₂e basis equal to or greater than 100,000 TPY?

      YES

      Go to next page

      NO

      If earlier, see New Source Flow Chart in Appendix A.

      Go to Element 7
5. Calculate the total GHG emissions on a mass basis.

6. Are the potential GHG emissions on a mass basis less than 250 TPY (or 100 TPY if the new source is in a listed category)?

   NO

   GHG emissions are subject to PSD as part of this permit review.

   YES

7. Is this a new stationary source subject to PSD for a regulated NSR pollutant other than GHGs?

   NO

   GHG emissions are not subject to PSD as part of this permit review.

   YES

8. Are the potential GHG emissions equal to or greater than 75,000 TPY

   NO

   GHG emissions are not subject to PSD as part of this permit review.

   YES

   GHG emissions are subject to PSD as part of this permit review.

* The mass-based emission threshold of zero TPY has been excluded from this flow chart because any new source that meets the 75,000 TPY CO₂e requirement would automatically exceed that mass based rate.
Appendix C. GHG Applicability Flow Chart – Existing Sources
(January 2, 2011, through June 30, 2011)

START

1. Will the permit be issued on or after January 2, 2011 but before July 1, 2011?
   - NO
   - YES

   3. Is this modification subject to PSD permitting for a regulated 6 SVR pollutant other than GHG?
      - NO
      - YES

   4. Determine the past actual (baseline) emissions in tons per year (TPY) for units that are part of the modification for each of the 6 GHG pollutants (CO2, CH4, N2O, HFCs, PFCs, and SF6).124

   5. Determine the future projected actual emissions (or PTE) in TPY for units that are part of the modification for each of the 6 GHG pollutants.125

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124 For new units, the past actual emissions are zero.
125 For new units that are not like-kind replacements, future actual emissions are always the PTE.
6. For each unit, determine the increase or decrease in emissions of each of the 6 GHG pollutants by subtracting past actual emissions from future actual emissions.

7. For each unit, sum any increase or decrease in GHG emissions on a mass basis.

8. For all units that have an emissions increase, sum the GHG emissions on a mass basis.

9. Is the sum of GHG emissions increase greater than zero TPY?

   NO

   GHG emissions are not subject to PSD as part of this permit review.

   YES

10. For each unit, convert any increase or decrease in emissions of each of the 6 GHG pollutants to their CO₂ equivalent (CO₂e) emissions using the global warming potential factors applied to the mass of each of the 6 GHG pollutants and sum them for each unit to arrive at one GHG CO₂e number for each unit.

11. For all units that have an emissions increase, sum the GHG emissions on a CO₂e basis.¹³⁰

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¹³⁰ Emission decreases are not considered at this step.
12. Is the sum of GHG emissions increases equal to or greater than 75,000 TPY?

YES

13. Contemporaneous netting analysis is required. Identify all contemporaneous creditable increases and decreases in emissions for each of the 6 GHG pollutants on a mass basis.\footnote{Creditable decreases are only those that have not been relied upon in prior PSD review and will be practically enforceable by the time construction begins.}

NO

14. For each creditable activity or event, determine the increase or decrease in emissions for each of the 6 GHG pollutants on a mass basis.

15. Sum the increases and decreases, including the increases and decreases from the proposed modification, for each of the 6 GHG pollutants on a mass basis.

16. Calculate the net GHG emissions on a mass basis.

Go to next page
17. Are the net GHG emissions on a mass basis over zero TPY?

- **NO**
  - GHG emissions are not subject to PSD as part of this permit review.

- **YES**
  
18. Convert any contemporaneous, creditable increase or decrease in emissions of each of the 6 GHG pollutants to their CO$_2$e emissions using the global warming potential factors applied to the mass of each of the 6 GHG pollutants and sum them.

19. Calculate the net GHG emissions on a CO$_2$e basis.

20. Are the net GHG emissions on a CO$_2$e basis equal to or greater than 75,000 TPY CO$_2$e?

- **NO**
  - GHG emissions are not subject to PSD as part of this permit review.

- **YES**
  - GHG emissions are subject to PSD as part of this permit review.
Appendix D. GHG Applicability Flowchart – Existing Sources
(On or after July 1, 2011)

START

1. Will the permit be issued on or after July 1, 2011?
   
   NO → If earlier, see Existing Source Flow Chart in Appendix C.

   YES → 2.

2. Is this modification subject to PSD permitting for a regulated NSR pollutant other than GHGs?
   
   NC → Determine the potential to emit (PTE) for the existing stationary source, before the modification, for each of the 6 GHG pollutants (CO₂, CH₄, N₂O, HFCs, PFCs and SF₆). Determine the mass based sum. Convert the emissions of GHG pollutants to their CO₂e emissions, using the global warming potential factors applied to the mass of each of the 6 GHG pollutants and sum the CO₂e emissions.

   YES → 3.

3. Are the potential GHG emissions greater than both 100,000 TPY CO₂e and 250 TPY (100 TPY if listed) on a mass basis?
   
   NO → 4.

4. Are GHG emissions of the modification equal or greater than both 100,000 TPY CO₂e and 250 TPY (100 TPY if listed) on a mass basis?
   
   NO → GHG emissions are not subject to PSD as part of this permit review.

   YES → 5.

5. Are GHG emissions subject to PSD as part of this permit review.

   YES → Go to next page

   NO → Go to next page

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132 For new units, the past actual emissions are zero.
7. For units that are part of the modification, determine the future projected actual emissions (or PTE) in FY for each of the 6 GHG pollutants.

8. For each unit, determine the increase or decrease in mass emissions of each of the 6 GHG pollutants by subtracting past actual emissions from future actual emissions.\(^{133}\)

9. For each unit, sum any increase or decrease in GHG emissions on a mass basis.

10. For all units that have a mass emissions increase, sum the GHG emissions on a mass basis.

11. Is the sum of GHG mass emissions increase over zero TPY?  

\[\text{\textbf{NO}}\]

\[\text{\textbf{YES}}\]

12. For each unit, convert any increase or decrease in emissions of each of the 6 GHG pollutants to their CO\(_2\)e emissions using the global warming potential factors applied to the mass of each of the 6 GHG pollutants and sum them for each unit to arrive at one GHG CO\(_2\)e number for each unit.

13. Sum the GHG emissions on a CO\(_2\)e basis for all units that have an emissions increase.\(^{134}\)

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\(^{133}\) For new units that are not like-kind replacements, future actual emissions are always the PTE.

\(^{134}\) Emission decreases are not considered in this step.
From prior page

14. Is the CO2e sum of the increases over 75,000 TPY CO2e?

NO

GHG emissions are not subject to PSD as part of this permit review.

YES

15. Contemporaneous netting analysis is required. Identify all contemporaneous creditable increases and decreases in emissions for each of the 6 GHG pollutants on a mass basis.\footnote{Creditable decreases are only those that have not been relied upon in prior PSD review and will be practically enforceable by the time construction begins.}

16. For each creditable activity or event, determine the increase or decrease in emissions for each of the 6 GHG pollutants.

17. Sum the increases and decreases, including the increases and decreases from the proposed modification, for each of the 6 GHG pollutants on a mass basis.

18. Calculate the net GHG emissions on a mass basis.

19. Are the net GHG emissions on a mass basis over zero TPY?

NO

GHG emissions are not subject to PSD as part of this permit review.

YES

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20. Convert any contemporaneous, creditable increase or decrease in emissions of each of the 6 GHG pollutants to their CO$_2$ equivalent emissions using the global warming potential factors applied to the mass of each of the 6 GHG pollutants and sum them.

21. Calculate the net GHG emissions on a CO$_2$e basis.

22. Are the net GHG emissions on a CO$_2$e basis equal to or greater than 75,000 TPY CO$_2$e?

- **NO**
  - GHG emissions are not subject to PSD as part of this permit review.

- **YES**
  - GHG emissions are subject to PSD as part of this permit review.