to the alternate standards of this section. For an engine family to be considered the baseline engine family, it must meet the following criteria:

(1) It must have been certified to all applicable emission standards in model year 2011. If the baseline engine was certified to a \( \text{NO}_x \) FEL above the standard and incorporated the same emission control technologies as the new engine family, you may adjust the baseline \( \text{CO}_2 \) emission rate to be equivalent to an engine meeting the 0.20 g/\text{hp-hr} \( \text{NO}_x \) standard and a \( \text{NO}_x \) FEL equal to 0.20 g/\text{hp-hr}, as described in paragraph (b)(1) of this section.

   (i) Use the following equation to relate model year 2009–2011 \( \text{NO}_x \) and \( \text{CO}_2 \) emission rates (g/\text{hp-hr}):
   \[
   \text{CO}_2 = a \times \log(\text{NO}_x) + b.
   \]

   (ii) For model year 2014–2016 engines certified to \( \text{NO}_x \) FELs above 0.20 g/\text{hp-hr}, correct the baseline \( \text{CO}_2 \) emissions to the actual \( \text{NO}_x \) FELs of the 2014–2016 engines.

   (iii) Calculate separate adjustments for transient and SET emissions.

(2) The baseline configuration tested for certification must have the same engine displacement as the engines in the engine family being certified to the alternate standards, and its rated power must be within five percent of the highest rated power in the engine family being certified to the alternate standards.

(3) The model year 2011 U.S.-directed production volume of the configuration tested must be at least one percent of the total 2011 U.S.-directed production volume for the engine family.

(4) The tested configuration must have cycle-weighted BSFC equivalent to or better than all other configurations in the engine family.

(c) This paragraph (c) applies if you certify all your engine families in the primary intended service class to the alternate standards of this section. For purposes of this section, you may combine light heavy-duty and medium heavy-duty engines into a single averaging set. Determine your baseline \( \text{CO}_2 \) emission rate as the production-weighted emission rate of the certified engine families you produced in the 2011 model year. If you produce engines for both tractors and vocational vehicles, treat them as separate averaging sets. Adjust the \( \text{CO}_2 \) emission rates to be equivalent to an engine meeting the average \( \text{NO}_x \) FEL of new engines (assuming engines certified to the 0.20 g/\text{hp-hr} \( \text{NO}_x \) standard have a \( \text{NO}_x \) FEL equal to 0.20 g/\text{hp-hr}), as described in paragraph (b)(1) of this section.

(d) Include the following statement on the emission control information label: “THIS ENGINE WAS CERTIFIED TO AN ALTERNATE \( \text{CO}_2 \) STANDARD UNDER §1036.620.”

(e) You may not bank \( \text{CO}_2 \) emission credits for any engine family in the same averaging set and model year in which you certify engines to the standards of this section. You may not bank any advanced technology credits in any averaging set for the model year you certify under this section (since such credits would be available for use in this averaging set). Note that the provisions of §1036.745 apply for deficits generated with respect to the standards of this section.

(f) You need our approval before you may certify engines under this section, especially with respect to the numerical value of the alternate standards. We will not approve your request if we determine that you manipulated your engine families or test engine configurations to certify to less stringent standards, or that you otherwise have not acted in good faith. You must keep and provide to us any information we need to determine that your engine families meet the requirements of this section. Keep these records for at least five years after you stop producing engines certified under this section.

§ 1036.625 In-use compliance with family emission limits (FELs).

You may ask us to apply a higher in-use FEL for certain in-use engines, subject to the provisions of this section. Note that §1036.225 contains provisions related to changing FELs during a model year.

(a) Purpose. This section is intended to address circumstances in which it is in the public interest to apply a higher in-use FEL based on forfeiting an appropriate number of emission credits.
(b) **FELs.** When applying higher in-use FELs to your engines, we would intend to accurately reflect the actual in-use performance of your engines, consistent with the specified testing provisions of this part.

(c) **Equivalent families.** We may apply the higher FELs to other families in other model years if they used equivalent emission controls.

(d) **Credit forfeiture.** Where we specify higher in-use FELs under this section, you must forfeit CO₂ emission credits based on the difference between the in-use FEL and the otherwise applicable FEL. Calculate the amount of credits to be forfeited using the applicable equation in §1036.705, by substituting the otherwise applicable FEL for the standard and the in-use FEL for the otherwise applicable FEL.

(e) **Requests.** Submit your request to the Designated Compliance Officer. Include the following in your request:

(1) The engine family name and model year of the engines affected.
(2) A list of other engine families/model years that may be affected.
(3) The otherwise applicable FEL for the engine families along with your recommendations for higher in-use FELs.
(4) Your source of credits for forfeiture.

(f) **Relation to recall.** You may not request higher in-use FELs for any engine families for which we have made a determination of nonconformance and ordered a recall. You may, however, make such requests for engine families for which you are performing a voluntary emission recall.

(g) **Approval.** We may approve your request if we determine that you meet the requirements of this section and such approval is in the public interest. We may include appropriate conditions with our approval or we may approve your request with modifications.

**Subpart H—Averaging, Banking, and Trading for Certification**

§ 1036.701 General provisions.

(a) You may average, bank, and trade (ABT) emission credits for purposes of certification as described in this subpart and in subpart B of this part to show compliance with the standards of §1036.108. Participation in this program is voluntary. (Note: As described in subpart B of this part, you must assign an FCL to all engine families, whether or not they participate in the ABT provisions of this subpart.)

(b) [Reserved]

(c) The definitions of subpart I of this part apply to this subpart. The following definitions also apply:

(1) **Actual emission credits** means emission credits you have generated that we have verified by reviewing your final report.

(2) **Averaging set** means a set of engines in which emission credits may be exchanged. Credits generated by one engine may only be used by other engines in the same averaging set. See §1036.740.

(3) **Broker** means any entity that facilitates a trade of emission credits between a buyer and seller.

(4) **Buyer** means the entity that receives emission credits as a result of a trade.

(5) **Reserved emission credits** means emission credits you have generated that we have not yet verified by reviewing your final report.

(6) **Seller** means the entity that provides emission credits during a trade.

(7) **Standard** means the emission standard that applies under subpart B of this part for engines not participating in the ABT program of this subpart.

(8) **Trade** means to exchange emission credits, either as a buyer or seller.

(d) Emission credits may be exchanged only within an averaging set as specified in §1036.740.

(e) You may not use emission credits generated under this subpart to offset any emissions that exceed an FCL or standard. This applies for all testing, including certification testing, in-use testing, selective enforcement audits, and other production-line testing. However, if emissions from an engine exceed an FCL or standard (for example, during a selective enforcement audit), you may use emission credits to recertify the engine family with a higher FCL that applies only to future production.

(f) Emission credits may be used in the model year they are generated. Surplus emission credits may be