may be obtained by agencies directly from the Applicant. If an agency does not file comments within the time specified for filing comments, it will be presumed to have no comments. One copy of an agency’s comments must also be sent to the Applicant’s representatives.

Lois D. Cashell,
Secretary.

[FR Doc. 96–6681 Filed 3–19–96; 8:45 am]

BILLING CODE 6717–01–M

Office of Energy Efficiency and Renewable Energy
[Case No. CAC–007]

Energy Conservation Program for Consumer Products: Decision and Order Granting a Waiver From the Central Air Conditioner and Central Air Conditioning Heat Pump Test Procedure to NORDYNE


ACTION: Decision and Order.

SUMMARY: Notice is given of the Decision and Order (Case No. CAC–007) granting a Waiver to NORDYNE from the existing Department of Energy test procedure for central air conditioners and central air conditioning heat pumps for the company’s Powermiser line of heat pumps with integrated water heating.

FOR FURTHER INFORMATION CONTACT:
Eugene Margolis, Esq., U.S. Department of Energy, Office of General Counsel, Mail Station GC–72, Forrestal Building, 1000 Independence Avenue, SW, Washington, DC 20585, (202) 586–9507

SUPPLEMENTARY INFORMATION: In accordance with 10 CFR Part 430, § 430.27(l), notice is hereby given of the issuance of the Decision and Order as set out below. In the Decision and Order, NORDYNE has been granted a Waiver from the existing Department of Energy central air conditioner and central air conditioning heat pump test procedure for the company’s Powermiser line of heat pumps with integrated water heating. The Waiver allows NORDYNE to use a modified test procedure for rating its Powermiser heat pumps. NORDYNE shall be allowed to calculate, in addition to the standard SEER and HSPF, a Combined Cooling Performance Factor (CCPF) and a Combined Heating Performance Factor (CHPF). These performance factors reflect the energy efficiency of the heat pump when providing both space conditioning and domestic water heating.

Issued in Washington, DC, on March 7, 1996.

Joseph Romm,
Acting Principal Deputy Assistant Secretary, Energy Efficiency and Renewable Energy.

Decision and Order
Department of Energy
Office of Energy Efficiency and Renewable Energy

In the Matter of: NORDYNE. (Case No. CAC–007)

Background
The Energy Conservation Program for Consumer Products (other than automobiles) was established pursuant to the Energy Policy and Conservation Act (EPCA), Public Law 94–163, 89 Stat. 917, as amended, which requires the Department to prescribe standardized test procedures to measure the energy consumption of certain consumer products, including central air conditioners. The intent of the test procedures is to provide a comparable measure of energy consumption that will assist consumers in making purchasing decisions. These test procedures appear at 10 CFR Part 430, Subpart B.

The Department amended the prescribed test procedures by adding 10 CFR 430.27 to create a waiver process. 45 FR 64108, September 26, 1980. Thereafter, the Department further amended its appliance test procedure waiver process to allow the Assistant Secretary for Energy Efficiency and Renewable Energy (Assistant Secretary) to grant an Interim Waiver from test procedure requirements to manufacturers that have petitioned the Department for a waiver of such prescribed test procedures. 51 FR 42823, November 26, 1986.

The waiver process allows the Assistant Secretary to waive temporarily test procedures for a particular basic model when a petitioner shows that the basic model contains one or more design characteristics which prevent testing according to the prescribed test procedures, or when the prescribed test procedures may evaluate the basic model in a manner unrepresentative of its true energy consumption as to provide materially inaccurate comparative data. Waivers generally remain in effect until final test procedure amendments become effective, resolving the problem that is the subject of the waiver.

NORDYNE filed a “Petition for Waiver” and an “Application for Interim Waiver,” dated January 24, 1995, in accordance with Section 430.27 of 10 CFR Part 430. The Department granted the Interim Waiver on July 10, 1995. The Department also published in the Federal Register on August 8, 1995, NORDYNE’s petition, and solicited comments, data, and information respecting the petition. 60 FR 40358, August 8, 1995.

NORDYNE’s Petition seeks a waiver from the existing Department of Energy central air conditioner and central air conditioning heat pump test procedure for the company’s Powermiser line of heat pumps because the Powermiser’s integrated water heating feature causes the prescribed test procedures to evaluate the Powermiser in a manner unrepresentative of its true energy consumption characteristics. NORDYNE’s heating and cooling mode test procedures are essentially the same as the current Departmental central air conditioner test procedures. In addition, NORDYNE submitted tests and a rating procedure to determine the performance of the heat pump when it heats domestic water (whether or not space heating or cooling is also being provided).

The Department received 14 written comments concerning either the “Petition for Waiver” or the “Interim Waiver.” All the comments supported granting the waivers.

Appalachian Power Company, Hawaiian Electric Company and Mr. Joe Zeiner of PSI Energy supported the waiver to encourage energy conservation devices. The Tennessee Valley Authority concurred with this, and also commented that the Powermiser “eliminates coincident peak demand for water heater[s] on the utility system.” Gulf Power Company, Tampa Electric Company, Alabama Power Company, Georgia Power Company and Mr. Leo Stambaugh commended the NORDYNE integrated appliance as a viable alternative to electric resistance water heating and supported NORDYNE’s proposed use of a Combined Cooling Performance Factor (CCPF) and Combined Heating Performance Factor (CHPF) for rating these products.

Dr. Arvo Lannus of Moebius Research commented that the present Department test procedures do not provide for testing products like the Powermiser, with the following adverse effects:
difficulty in educating consumers about the product’s benefits; difficulty for the manufacturer to recoup its investment; difficulty for private research institutions to fund research and development in support of energy efficiency goals. Dr. Lannus stated that the Powermiser would benefit consumers and society, in terms of efficiency and environmental benefits. He wrote that the testing and rating procedure, using SEER, HSPF, CCPF and CHPF is reasonable, and also agreed with the proposed bin method of calculation.

Mr. Terry Statt of the Electric Power Research Institute stated that the current DOE test procedure evaluates the Powermiser heat pump in a manner unrepresentative of its actual energy consumption, and that this creates economic hardship for NORDYNE. He further commented that this causes consumers to purchase systems that have higher [total monetary] costs and higher environmental costs. Mr. Statt agreed with NORDYNE’s use of a bin method of calculation and the division of the year into two sections (heating and cooling).

The Natural Resources Defense Council supported the concept of the heat pump with integrated water heating as an energy savings device and urged the Department to provide test procedures that accurately estimate the device’s energy savings. Virginia Power concurred with this and also commented on the need for a standard test procedure for combined equipment, including fossil-fueled combination heating/water heating units, heat pumps and air conditioners with integral desuperheaters, combined residential energy storage units and triple function heat pumps such as the NORDYNE Powermiser. Virginia Power also commented that the standard test procedure should use water heating settings and use patterns which reflect current consumer use (see Virginia Power Comments on Proposed Rulmaking, Energy Conservation Program for Consumer Products, Test Procedures for Water Heaters, Docket No. EE–RM–94–230, August 30, 1995.) Allegheny Power System commented about the need for a suitable test procedure for integrated water heating systems, and, like Virginia Power, requested that the Department revise the domestic water heater test procedure to reflect a lower daily hot water consumption, and a different schedule for water draws.

The comments of Virginia Power and Allegheny Power about water usage, draw schedules and integrated appliances are beyond the scope of this waiver. The Department may address these issues in upcoming test procedure rules, but, for consistency, this waiver will conform to the existing usage and draws.

The Department consulted with the Federal Trade Commission (FTC) concerning the NORDYNE Petition. The FTC did not have any objections to the issuance of the waiver to NORDYNE.

**Assertions and Determinations**

NORDYNE’s Petition seeks a waiver from the existing Department of Energy central air conditioner and central air conditioning heat pump test procedure for the company’s Powermiser line of heat pumps because the Powermiser’s integrated water heating feature causes the prescribed test procedures to evaluate the Powermiser in a manner unrepresentative of its true energy consumption characteristics. DOE agrees that, using the current central air conditioning test procedure, the company cannot account for the energy savings associated with integrated water heating.

NORDYNE has submitted a modified test procedure to be used for rating its Powermiser heat pumps. NORDYNE proposes to calculate, in addition to SEER and HSPF, a Combined Cooling Performance Factor (CCPF) and a Combined Heating Performance Factor (CHPF) for characterizing the water heating and space conditioning performance of the Powermiser. However, to provide a comparable base, NORDYNE had to slightly modify the calculation of SEER and HSPF. The NORDYNE proposed heating and cooling mode test procedures for SEER and HSPF are essentially the same as the current Departmental central air conditioner test procedures found in 10 CFR Part 430, Subpart B, Appendix M. NORDYNE’s test procedures differ from the Department’s in their use of a bin analysis for SEER, and in their use of seasonal hours rather than fractional hours for HSPF. NORDYNE states in its Petition that the modified test procedure for SEER and HSPF “yields nearly identical results.” The Department concurs with NORDYNE’s statement regarding the results for SEER and HSPF, and no commenter communicated any disagreement with it.

In addition, NORDYNE submitted tests and a rating procedure to determine the performance of the heat pump when it heats domestic water (whether or not space heating or cooling is also being provided). These performance factors reflect the energy efficiency of the heat pump when providing both space conditioning and domestic water heating. CCPF is the sum of the total space cooling load and the total domestic water heating load during the cooling season, divided by the total energy consumption used for space cooling and water heating over the same period, expressed in Btu/Wh. CHPF is the analogous factor with “space heating” substituted for “space cooling.” NORDYNE presented examples of cost savings calculations in its Petition for Waiver. In the Petition, NORDYNE compared the annual cost for heating, cooling and water heating of the NORDYNE Powermiser to a combination of a conventional heat pump and an electric water heater.

DOE agrees that, using the current central air conditioning test procedure, the company cannot account for the energy savings associated with integrated water heating, and that the procedures described in NORDYNE’s Petition for Waiver will allow NORDYNE to calculate these energy savings. The Department agrees that a waiver should be granted to allow NORDYNE to test its Powermiser line of heat pumps according to NORDYNE’s proposed test procedure.

Thus, the Department is granting a waiver of the requirement to test NORDYNE’s Powermiser line of heat pumps according to the current test procedure.

It is, therefore, ordered that:

(1) The “Petition for Waiver” filed by NORDYNE (Case No. CA–C–007) is hereby granted as set forth in paragraph (2) below, subject to the provisions of paragraphs (3), (4) and (5).

(2) NORDYNE shall be required to test its Powermiser line of heat pumps on the basis of the test procedures specified in 10 CFR Part 430, Subpart B, Appendix M, including the modifications summarized in Attachment A to the letter to NORDYNE granting the Interim Waiver. These modifications are fully presented on pages 2–32 of NORDYNE’s attachment to its Petition for Waiver and Application for Interim Waiver, dated January 24, 1995.

(3) NORDYNE shall also test and represent:

- The annual and seasonal energy use and cost of operation of its Powermiser line of heat pumps, and
- The annual and seasonal cost savings of its Powermiser line of heat pumps, when compared to the combination of a conventional heat pump and electric water heater, as follows:
Annual energy usage for the conventional heat pump and water heater:

\[ AE_{sep} = \sum_{j=1}^{8} \left( E_{\text{cool}}(T_j) + E_{\text{hwh}}(T_j) \right) + \sum_{j=1}^{15} \left( E_{\text{heat}}(T_j) + E_{\text{hwh}}(T_j) \right) \]

where \( E_{\text{cool}}(T_j) \) is the total system energy input for cooling for the \( j^{th} \) outdoor bin temperature, and is equal to:

\[ E_{\text{cool}}(T_j) = \frac{CL \left(T_j\right) \times \hat{E}_c(T_j) \times n_j}{PLF(T_j)} \]

where: \( CL \left(T_j\right) = \frac{BL \left(T_j\right)}{Q_c(T_j)} \) = Cooling load factor for outdoor temperature bin \( j \).

\[ PLF(T_j) = 1 - C_d \times (1 - CL \left(T_j\right)) \] = The part–load factor for outdoor temperature bin \( j \).

\[ BL(T_j) = \left( \frac{T_j - 65}{95 - 65} \right)^{9°F} \times \hat{Q}_{se}(95°F) \]

\[ \hat{Q}_c(T_j) = \hat{Q}_c(82°F) + \left( \frac{\hat{Q}_c(95°F) - \hat{Q}_c(82°F)}{95 - 82} \right) \times (T_j - 82°F) \]

\( C_d \) is the coefficient of cyclic degradation for cooling. \( E_\text{(Tj)} \) is the steady-state electrical power input to the heat pump in the space cooling only mode determined according to:

\[ \hat{E}_c(T_j) = \hat{E}_c(82°F) + \frac{\hat{E}_c(95°F) - \hat{E}_c(82°F)}{95 - 82} \times (T_j - 82°F) \]

\( E_{\text{heat}}(T_j) \) is the total system energy input for heating for the \( j^{th} \) outdoor bin temperature, and is equal to:

\[ E_{\text{heat}}(T_j) = \frac{HLF(T_j) \times \hat{E}_h(T_j) \times n_j}{PLF(T_j)} + E_{aux}(T_j) \times n_j \]

where \( HLF(T_j) \) is the heat pump heating load factor for outdoor temperature bin \( j \):

\[ HLF(T_j) = \frac{BL(T_j)}{Q_h(T_j)} \text{ for } Q_h(T_j) > BL(T_j) \]

and \( HLF(T_j) = 1 \) for \( Q_h(T_j) \leq BL(T_j) \)

\[ BL(T_j) = \left( \frac{65 - T_j}{65 - \text{DHT}} \right)^{9°F} \times 0.77 \times \text{DHR} \]

\[ PLF(T_j) = 1 - C_d \times (1 - HLF(T_j)) \]

\( C_d \) is the coefficient of cyclic degradation for heating. The steady-state heat pump space heating capacity in the space heating only mode is determined according to:
\[
\dot{Q}_h(T_j) = \begin{cases} 
\dot{Q}_h(17^\circ F) + \frac{\dot{Q}_h(47^\circ F) - \dot{Q}_h(17^\circ F)}{(47 - 17)^\circ F} \times (T_j - 17^\circ F), & \text{for } T_j \geq 45^\circ F \text{ or } T_j \leq 17^\circ F \\
\dot{Q}_h(17^\circ F) + \frac{\dot{Q}_h(35^\circ F) - \dot{Q}_h(17^\circ F)}{(35 - 17)^\circ F} \times (T_j - 17^\circ F), & \text{for } 17^\circ F < T_j < 45^\circ F 
\end{cases}
\]

\(E_{aux}(T_j)\) is the auxiliary resistance heat required to meet the building load.

\[
E_{aux}(T_j) = \frac{BL(T_j) - \dot{Q}_h(T_j) \times HLF(T_j)}{3.413}
\]

The steady-state electrical power input to the heat pump in the space heating only mode is determined according to:

\[
\dot{E}_h(T_j) = \begin{cases} 
\dot{E}_h(17^\circ F) + \frac{\dot{E}_h(47^\circ F) - \dot{E}_h(17^\circ F)}{(47 - 17)^\circ F} \times (T_j - 17^\circ F), & \text{for } T_j \geq 45^\circ F \text{ or } T_j \leq 17^\circ F \\
\dot{E}_h(17^\circ F) + \frac{\dot{E}_h(35^\circ F) - \dot{E}_h(17^\circ F)}{(35 - 17)^\circ F} \times (T_j - 17^\circ F), & \text{for } 17^\circ F < T_j < 45^\circ F 
\end{cases}
\]

The energy usage for conventional water heating is also subdivided into cooling and heating seasons, depending on the outdoor temperature being above or below 65°F. For the cooling season, the water heating energy usage per hour is:

\[
\dot{Q}_{hw} = \frac{\dot{Q}_{hw} \times (CSH + N_{dwc})}{E_F \times 3413}
\]

\[
\dot{Q}_{hw} = \frac{GPD}{24} \times \rho(135^\circ F) \times C_p(96.5^\circ F) \times (135^\circ F - 58^\circ F)
\]

GPD is the total daily consumption of domestic hot water in gallons, and for rating purposes is equal to 64.3 gallons.
\(\rho(135^\circ F)\) is the density of water in pounds/gallon at the temperature of the water leaving the tank.
\(C_p(96.5^\circ F)\) is the specific heat of water at the temperature midway between 58°F and 135°F.
CSH = Cooling season hours.
\(N_{dwc}\) = Number of extra hours for dedicated water heating with the outdoor temperature above 65°F.
\(E_F\) = The energy factor as defined in the DOE hot water heater test procedures.
The cooling and heating load seasonal hours are calculated from the cooling and heating load hours as follows:
CSH = \frac{\text{CLH} \times 1.1 \times (\text{DCT} - 65)\degree \text{F}}{\sum_{j=1}^{8} (T_{j} - 65\degree \text{F}) \times \frac{n_{j}}{N}}

and

HSH = \frac{\text{HLH} \times (65 - \text{DHT})\degree \text{F}}{\sum_{j=1}^{15} (65\degree \text{F} - T_{j}) \times \frac{n_{j}}{N}}

where:

CSH = \text{Cooling season hours}

CLH = \text{Cooling load hours}

1.1 = \text{The oversizing factor used to determine building load}

DCT = \text{Design cooling temperature} = 95\degree \text{F}.

T_{j} = \text{Temperature for the jth outdoor bin temperature}.

n_{j}/N = \text{Season fractional bin hours}.

HSH = \text{Heating season hours}.

HLH = \text{Heating load hours}.

DHT = \text{Design heating temperature}.

The extra dedicated water heating hours are then:

N_{\text{dw}} = 8760 - \text{CSH} - \text{HSH}.

where:

N_{\text{dw}} = \text{Total number of extra hours for dedicated water heating}.

8760 = \text{Total hours per year}.

The extra dedicated water heating hours are next divided between the parts of the year warmer and cooler than 65\degree \text{F} in proportion to the cooling and heating season hours as follows:

N_{\text{dwc}} = N_{\text{dw}} \times \frac{\text{CSH}}{\text{CSH} + \text{HSH}}

N_{\text{dwh}} = N_{\text{dw}} \times \frac{\text{HSH}}{\text{CSH} + \text{HSH}}

where:

N_{\text{dwc}} = \text{Number of extra hours for dedicated water heating with the outdoor temperature above 65\degree \text{F}}.

N_{\text{dwh}} = \text{Number of extra hours for dedicated water heating with the outdoor temperature below 65\degree \text{F}}.

For the heating season, the water heating energy usage per hour is:

E_{\text{hwh}} = \frac{\dot{Q}_{\text{hw}} \times (\text{HSH} + N_{\text{dwh}})}{E_{F} \times 3413}

The annual energy usage for the integrated heat pump and water heater is:

AE_{\text{int}} = \sum_{j=1}^{8} \left( E_{\text{Powc}}(T_{j}) + \sum_{j=1}^{15} E_{\text{Powh}}(T_{j}) \right)

E_{\text{Powc}}(T_{j}) = \frac{\left( X_{1}(T_{j}) \times \dot{E}_{c}(T_{j}) + X_{2}(T_{j}) \times \dot{E}_{\text{ccw}}(T_{j}) + X_{3}(T_{j}) \times \dot{E}_{\text{wde}}(T_{j}) \right) \times n_{j}}{\text{PLF}(T_{j})} + E_{\text{auxw}}(T_{j}) - E_{\text{sav}}(T_{j}) + E_{\text{dwehc}}(T_{j})

E_{\text{Powh}}(T_{j}) = \frac{\left( X_{1}(T_{j}) \times \dot{E}_{h}(T_{j}) + X_{2}(T_{j}) \times \dot{E}_{\text{hwc}}(T_{j}) + X_{3}(T_{j}) \times \dot{E}_{\text{wdeh}}(T_{j}) \right) \times n_{j}}{\text{PLF}(T_{j})} + E_{\text{auxw}}(T_{j}) + E_{\text{auxh}}(T_{j}) + E_{\text{dwehh}}(T_{j})

The terms in these equations are all defined in NORDYNE's petition, published in the Federal Register on August 8, 1995, 60 FR 40358.

The seasonal and annual energy and cost credits (savings) shall be calculated as follows: The summer, or cooling season energy credit, in kWh, is:

EC_{\text{cool}} = \sum_{j=1}^{8} \left( E_{\text{cool}}(T_{j}) + E_{\text{hwc}}(T_{j}) - E_{\text{Powc}}(T_{j}) \right)

The winter, or heating season energy credit, in kWh, is:
EC_{\text{heat}} = \sum_{j=1}^{15} (E_{\text{heat}}(T_j) + E_{\text{hw}(T_j)} - E_{\text{Pow}(T_j)})

The annual energy credit (savings), in kWh, for the Powermiser integrated heat pump/water heating appliance is:

\[ AEC = AE_{\text{sep}} - AE_{\text{int}} \]

or

\[ AEC = EC_{\text{cool}} + EC_{\text{heat}} \]

The annual cost credit (savings), in dollars, for the Powermiser integrated heat pump/water heating is:

\[ ACC = AEC \times ER \]

where ER is the representative average unit cost of electricity as provided by the Secretary.

(4) The Waiver shall remain in effect from the date of issuance of this Order until the Department prescribes final test procedures appropriate to the Powermiser line of heat pumps manufactured by NORDYNE.

(5) This Waiver is based upon the presumed validity of statements, allegations, and documentary materials submitted by the petitioner. This Waiver may be revoked or modified at any time upon a determination that the factual basis underlying the petition is incorrect.

(6) Effective March 1, 1996, this Waiver supersedes the Interim Waiver granted NORDYNE on July 10, 1995. 60 FR 40358, August 8, 1995 (Case No. CA-007).

Issued in Washington, DC, on March 1, 1996.

Joseph Romm,
Acting Principal Deputy Assistant Secretary, Energy Efficiency and Renewable Energy.


SUPPLEMENTARY INFORMATION:

Purpose of the Meeting
To provide advice on a continuing basis to the Director of Energy Research on the many complex scientific and technical issues that arise in the development and implementation of the health and environmental research program.

Tentative Agenda
Thursday, April 11, 1996, and Friday, April 12, 1996:
- Welcome Remarks
- Opening of Meeting
- Remarks by the Director of the Office of Energy Research
- Office of Health and Environmental Research Program Overview: Scope, Issues, Budget
- Review of Office of Health and Environmental Research Programs
- Review of Subcommittee Activities
- New Business
- Public Comment (10-minute rule)

Public Participation
The two-day meeting is open to the public. Written statements may be filed with the Committee either before or after the meeting. Members of the public who wish to make oral statements pertaining to agenda items should contact Benjamin Barnhart at the address or telephone number listed above. Requests to make oral statements must be received five days prior to the meeting; a reasonable provision will be made to include the statement in the agenda. The Chairperson of the Committee is empowered to conduct the meeting in a fashion that will facilitate the orderly conduct of business.

Transcripts
The transcript of this meeting will be available for public review and copying at the Freedom of Information Public Reading Room, IE–190, Forrestal Building, 1000 Independence Avenue, S.W., Washington, D.C., between 9:00 a.m. and 4:00 p.m., Monday through Friday, except holidays.

Issued in Washington, D.C. on March 8, 1996.

Rachel Murphy Samuel,
Acting Deputy Advisory Committee Management Officer.

[F] [R Doc. 96–6711 Filed 3–19–96; 8:45 am] BILLING CODE 6450–01–P

Office of Energy Research

Health and Environmental Research Advisory Committee; Notice of Open Meeting

AGENCY: Office of Energy Research, DOE.

ACTION: Notice of open meeting.

SUMMARY: Pursuant to the provisions of the Federal Advisory Committee Act (Public Law 92–463, 86 Stat. 770), notice is given of a meeting of the Health and Environmental Research Advisory Committee.

DATES: Thursday, April 11, 1996, 8:30 a.m. to 5:30 p.m.; and Friday, April 12, 1996, 8:30 a.m. to 12:00 p.m.