

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the matter of the application of The )  
Empire District Electric Company for a )  
variance from the provisions of 4 CSR ) CASE NO. EO-95-4  
240-14.020 regarding the E Home Pilot )  
Program. )

APPEARANCES: Gary W. Duffy, Attorney at Law, P.O. Box 456, Jefferson  
City, Missouri 65102-0456, For The Empire District  
Electric Company.

Brad Ziegler, Attorney at Law, 3420 Broadway, Kansas  
City, Missouri 64111, For Missouri Gas Energy.

Lewis R. Mills, Jr., Deputy Public Counsel, P.O. Box  
7800, Jefferson City, Missouri 65102, For the Office  
of the Public Counsel and the Public.

Cherlyn D. McGowan, Assistant General Counsel, P.O. Box  
360, Jefferson City, Missouri 65102, For the Staff  
of the Missouri Public Service Commission.

Hearing  
Examiner: Anne Wickliffe Freeman

REPORT AND ORDER

On June 23, 1994, The Empire District Electric Company (Empire or the company) filed proposed tariff sheets bearing an effective date of July 25, 1994, which would create a two-year, demand-side pilot program to be called the E Home Program (Program). Because the E Home program could result in violations of 4 CSR 240-14.020 prohibiting certain promotional practices, Empire filed an application requesting a variance from those provisions on July 6, 1994. Empire requested that the effective date of the proposed tariff be extended to August 25, 1994. Missouri Gas Energy (MGE or Intervenor), the Office of the Public Counsel (OPC), and the Staff

of the Public Service Commission (Staff) filed responses to Empire's application objecting to certain aspects of the program. The tariffs were suspended on August 23, 1994. At a prehearing conference on September 22, 1994, MGE moved for permission to intervene; permission was granted. The parties resolved the issues and filed their Unanimous Stipulation and Agreement on November 2, 1994.

On November 21, 1994, in open hearing, the parties presented the Unanimous Stipulation and Agreement (Agreement) to the Commission for approval. The parties waived the presentation of evidence, the reading of the transcript by the Commission, and the right to judicial review, should the Commission approve the Agreement.

#### Findings of Fact

The Missouri Public Service Commission, having considered all of the competent and substantial evidence upon the whole record, makes the following findings of fact:

This case is properly before the Commission on a Request for Variance filed by Empire. The parties have presented a Unanimous Stipulation and Agreement for Commission consideration which is attached to this Report and Order, identified as Attachment 1, and incorporated herein by reference.

The Agreement provides for approval of the tariff sheets necessary to put the E Home Pilot Program into effect. The parties request a preferred effective date of December 1, but no later than December 31, 1994, for the tariff sheets. The Agreement further calls for approval of Agreement Appendix B, consisting of a general description of the Program, the marketing plan, plan for program delivery and verification, a description of the Program guarantee, methods for Program tracking and reporting, and for Program evaluation. The parties request that Appendix

B be found by Commission to be in compliance with 4 CSR 240-14.040(B). The Agreement provides for a variance, for the life of the E Home Program, as described in the tariffs, from the provisions of 4 CSR 240-14.020(1)(E), and from any other provisions of 4 CSR 240-14 which may be appropriate under the circumstances, in order for the E Home Program to be implemented as described.

Finally, the Agreement provides for approval of the Program's Implementation Manual as revised in Agreement Appendix C. The Implementation Manual constitutes a part of the tariff filing submitted to the Commission on June 23, 1994, and Empire has agreed to revise the manual in accordance with Appendix C.

Having heard the presentations of the parties and reviewed the Unanimous Stipulation and Agreement, the Commission is of the opinion that the Program, as modified by the parties during negotiations, constitutes a demand-side management program with potential for encouraging more energy efficient housing among Empire customers and for reducing Empire's summertime peak load due to inefficient air conditioning units. The Commission finds that the Agreement represents a reasonable resolution of the issues raised in this case and that the granting of a variance for the life of the E Home Pilot Program as described in the tariff sheets is in the public interest. Therefore, the Commission adopts the Unanimous Stipulation and Agreement (Attachment 1) filed November 2, 1994, and approves its Appendices B and C.

#### Conclusions of Law

The Commission, therefore, makes the following conclusions of law:

The Empire District Electric Company is a public utility subject to the jurisdiction of the Missouri Public Service Commission pursuant to Chapters 386 and 393 of the Revised Statutes of Missouri, as amended. The Commission concludes that it has legal authority to accept a stipulation and agreement as offered by the parties as a resolution of the issues raised in this case, pursuant to § 536.060 RSMo (1986). Based upon the information contained within the Unanimous Stipulation and Agreement of the parties, and the supporting information offered at the hearing of November 21, 1994, the Commission concludes that the Unanimous Stipulation and Agreement should be approved.

**IT IS THEREFORE ORDERED:**

1. That the Unanimous Stipulation and Agreement (Attachment 1 to this Report and Order), filed on November 2, 1994, be adopted by the Commission for resolution of all issues.

2. That The Empire District Electric Company be granted a variance from the provisions of 4 CSR 240-14.020 which might otherwise be violated by its E Home Pilot Program, and specifically from 4 CSR 240-14.020(1)(E), for the life of the program as described in the tariff sheets, beginning on the effective date of this Report and Order.

3. That the variance granted herein be conditioned upon The Empire District Electric Company's compliance with the Stipulation and Agreement in every particular.

4. That the tariff sheets filed on June 23, 1994, regarding the E Home Pilot Program be rejected and The Empire District Electric Company shall file, in lieu thereof, tariff sheets consistent with the Unanimous Stipulation and Agreement and with this Report and Order, to become effective on the effective date of this Report and Order.

5. That this Report and Order shall become effective on  
December 9, 1994.

BY THE COMMISSION

A handwritten signature in cursive script, reading "David L. Rauch".

David L. Rauch  
Executive Secretary

(S E A L)

McClure, Perkins, and Kincheloe, CC.,  
Concur.  
Mueller, Chm., and Crumpton, C., Absent.

Dated at Jefferson City, Missouri,  
on this 29th day of November, 1994.

BEFORE THE PUBLIC SERVICE COMMISSION  
OF THE STATE OF MISSOURI

In the matter of the application     )  
of The Empire District Electric     )  
Company for a variance from the     )     Case No. EO-95-4  
provision of 4 CSR 240-14.020     )  
regarding the E Home Pilot Program.)

UNANIMOUS STIPULATION AND AGREEMENT

The Empire District Electric Company ("Empire") filed proposed tariff sheets on June 23, 1994, relating to its proposed "E Home Program" and an Application for Variance relating to the same on July 6, 1994. The E Home Program is a two-year demand-side pilot program. Empire subsequently extended the proposed effective date of the tariffs from July 25, 1994 to August 25, 1994.

The Office of the Public Counsel filed a response to the application for variance, opposing the same, on July 21, 1994. Missouri Gas Energy ("MGE") filed a response on July 20, 1994, raising concerns about portions of the contents of the materials submitted by Empire and requesting that either certain portions be stricken or more adequately explained.

The Staff filed a response to the application for variance on August 18, 1994, recommending that the proposed tariffs not be approved. Staff indicated that with some modifications, however, it might recommend approval.

FILED

NOV 2 1994

MISSOURI  
PUBLIC SERVICE COMMISSION

The Commission, by order dated August 23, 1994, suspended the proposed tariffs to June 21, 1995, and scheduled a prehearing conference for September 22, 1994. Additionally, the Commission consolidated tariff filing 9400769 (the filing in which the E Home tariff sheets were submitted) with this case.

All the parties attended the prehearing conference and, as a result of negotiations and discussions conducted before, during and after the prehearing conference, have reached the following agreements with regard to this consolidated proceeding and recommend the following actions to the Commission:

1. That the tariff sheets attached hereto in Appendix A and identified as PSC Mo. No. 5, Sec. A, 9th Revised Sheet No. 1, cancelling PSC Mo. No. 5, Sec. A, 8th Revised Sheet No. 1; PSC Mo. No. 5, Sec. 4, Original Sheet No. 16; and PSC Mo. No. 5, Sec. 4, Original Sheet No. 17 should be approved by the Commission in an order approving this Stipulation and Agreement, and Empire be authorized to file those tariffs in compliance therewith. The parties recommend the Commission approve an effective date for the tariffs no later than December 1, 1994.

2. That the three page document identified as Appendix B describing the E Home Pilot Program in general, along with the marketing plan, program delivery and verification, a description of the guarantee, program tracking and reporting, and program evaluation, be approved by the Commission as in compliance with 4 CSR 240-14.040(B).

3. That the Commission's order approving the Stipulation and Agreement also grant a permanent variance, for the life of the E Home Program as described in the tariffs, from the provisions of 4 CSR 240-14.020(1)(E), and from any other provisions of 4 CSR 240-14 which may be appropriate under the circumstances, in order for the E Home Program to be implemented as described.

4. Empire agrees to revise certain pages of its E Home Implementation Manual submitted to the Commission on June 23, 1994, as a part of the tariff filing. The pages to be revised are set out in Appendix C hereto. If the Commission approves this Stipulation and Agreement, Empire will modify the Implementation Manual to substitute the pages in Appendix C for those previously contained in the manual.

5. None of the signatories hereof shall be deemed to have approved or acquiesced in any ratemaking principle or any method of cost determination or cost allocation underlying or allegedly underlying the Stipulation and Agreement.

6. This Stipulation and Agreement has resulted from extensive negotiations among the parties and the terms hereof are interdependent. In the event the Commission does not approve and adopt this Stipulation and Agreement in total, or in the event the tariffs agreed to herein do not become effective prior to December 31, 1994, and the necessary and appropriate variances are granted to allow the E Home Program to become effective before that date,



this Stipulation and Agreement shall be void and no party shall be bound by any of the agreements or provisions hereof.

7. In the event the Commission accepts the specific terms of this Stipulation and Agreement, the parties waive their respective rights to cross-examine witnesses and to present oral argument and written briefs pursuant to Section 536.080.1 RSMo 1986; their respective rights to the reading of the transcript by the Commission pursuant to Section 536.080.2 RSMo 1986; and their respective rights to judicial review pursuant to Section 386.510 RSMo 1986.

8. This Stipulation and Agreement represents a negotiated settlement for the sole purpose of disposing of this case, and none of the signatories to this Stipulation and Agreement shall be prejudiced or bound in any manner by the terms of the Stipulation and Agreement in any other proceeding, except as otherwise specified herein.

9. If requested by the Commission, the Staff shall have the right to submit to the Commission a memorandum explaining its rationale for entering into this Stipulation and Agreement. Each party of record shall be served with a copy of any memorandum and shall be entitled to submit to the Commission, within five (5) days of receipt of Staff's memorandum, a responsive memorandum which shall also be served on all parties. All memoranda submitted by the parties shall be considered privileged in the same manner as are settlement discussions under the Commission's rules, shall be

maintained on a confidential basis by all parties, and shall not become a part of the record of this proceeding or bind or prejudice the party submitting such memorandum in any future proceeding or in this proceeding whether or not the Commission approves this Stipulation and Agreement. The contents of any memorandum provided by any party are its own and are not acquiesced in or otherwise adopted by the other signatories to the Stipulation and Agreement, whether or not the Commission approves and adopts this Stipulation and Agreement.

The Staff shall also have the right to provide, at any agenda meeting at which this Stipulation and Agreement is noticed to be considered by the Commission, whatever oral explanation the Commission requests, provided that the Staff shall, to the extent reasonably practicable, provide the other parties with advance notice of when the Staff shall respond to the Commission's request for such explanation once such explanation is requested from Staff. Staff's oral explanation shall be subject to public disclosure, except to the extent it refers to matters that are privileged or otherwise protected from disclosure.

WHEREFORE, for the foregoing reasons, the undersigned parties respectfully request that the Commission issue its Order:

- a) approving the text of the sample tariff sheets attached as Appendix A and authorizing Empire to file compliance tariffs in accordance therewith with an effective date to be specified by the

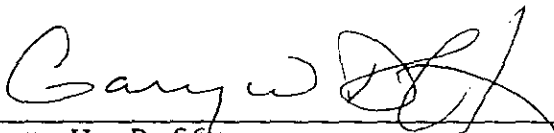
Commission; preferably December 1, 1994, but no later than December 31, 1994;

b) authorizing a permanent variance, for the life of the E Home Program as described in the tariffs, from the provisions of 4 CSR 240-14.020(1)(E), and from any other provisions of 4 CSR 240-14 which may be appropriate under the circumstances, in order for the E Home Program to be implemented as described;

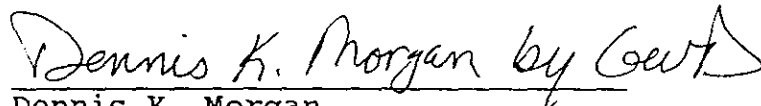
c) finding that the material contained in Appendix B is in compliance with 4 CSR 240-14.040(B);

d) and such further relief as may be appropriate to implement the Stipulation and Agreement.

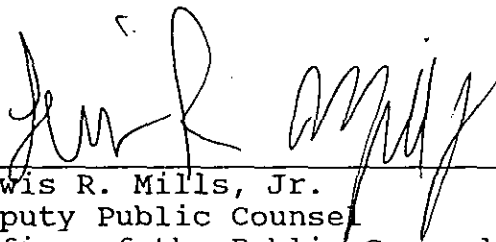
Respectfully submitted,

  
\_\_\_\_\_  
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Brydon, Swearingen & England P.C.  
P.O. Box 456  
Jefferson City, Missouri 65102-0456

Attorneys for The Empire  
District Electric Company

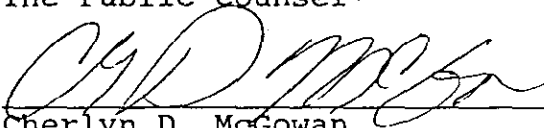
  
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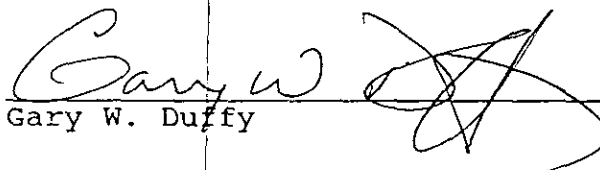


Cherlyn D. McGowan  
Assistant General Counsel  
P.O. Box 360  
Jefferson City, Missouri 65102

Attorney for the Staff of the  
Missouri Public Service Commission

#### CERTIFICATE OF SERVICE

I hereby certify that copies of the foregoing have been mailed or hand-delivered to all counsel of record as shown above this 2nd day of November, 1994.

  
Gary W. Duffy

## THE EMPIRE DISTRICT ELECTRIC COMPANY

Sec. A 9th Revised Sheet No. 1  
Cancelling P.S.C. Mo. No. 5For ALL TERRITORYNo supplement to this tariff will be issued except  
for the purpose of cancelling this tariff.Sec. A 8th Revised Sheet No. 1  
Which was issued 08-02-94TABLE OF  
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STATE OF MISSOURI, PUBLIC SERVICE COMMISSION  
THE EMPIRE DISTRICT ELECTRIC COMPANY

P.S.C. Mo. No. 5

Sec. 4 Original Sheet No. 16  
Cancelling P.S.C. Mo. No. \_\_\_\_\_

For ALL TERRITORY

No supplement to this tariff will be issued except  
for the purpose of cancelling this tariff.

Sec. \_\_\_\_\_ Revised Sheet No. \_\_\_\_\_  
Which was issued \_\_\_\_\_

E HOME PILOT PROGRAM  
SCHEDULE EH

APPLICATION:

This rate schedule provides for the offer of a Comfort Guarantee to new residential Customers of the Company who install electric central air conditioning systems in homes built to the Company's E Home Program standards, and to existing Customers who install new electric central air conditioning systems in their homes after upgrading them to meet the E Home Program standards. This will serve as a pilot program to test the cost effectiveness of the E Home Program for achieving demand side management goals for efficiency and demand reduction.

AVAILABILITY:

This program shall only be available for two years from the effective date of tariffs implementing this schedule, and will be uniformly offered to all residential Customers meeting the criteria set out in this schedule.

The Company will provide program information and technical assistance to all new residential Customers who express an interest in building their home to E Home Program standards, and to all existing Customers who express an interest in upgrading their home to E Home Program standards.

CERTIFICATION:

Any Customer wishing to have a home certified as an E Home should inform the Company at the beginning of the construction or remodeling process. The Company will supply the Customer with the information necessary to understand the requirements for certification.

In order to be certified as an E Home, the minimum standards for the building envelope and the equipment used in the home, as well as the HVAC Quality Installation Standards, must be met. Participants will also be encouraged to incorporate features into their homes that contribute to improved indoor air quality, environmental awareness, and the use of solar energy. These standards and recommendations are found in the Empire E Home Implementation Manual.

The Company will conduct compliance verification checks as needed throughout the construction or remodeling process to assure that program requirements have been met. Once the Company has verified that the appropriate standards have been met, the Customer's home will be certified as an E Home.

COMFORT GUARANTEE:

When a home is certified as an E Home and new electric central air conditioning equipment, sized within 1/2 ton of the cooling load calculated by Empire is installed in the home, the Company will offer to the owner of the certified home an "E Home Comfort Guarantee". As more specifically stated in the guarantee, if after twelve months of occupancy, the Customer is dissatisfied with the cooling comfort provided by the electric central air conditioning system due to equipment sizing, and if the Customer's dissatisfaction is not resolved within a reasonable time, the Company will convert the system to a new system of the same type, sized according to the Customer's wishes, subject to the terms and conditions of the guarantee. This agreement between the Company and the Customer shall be in the form set out in sheet no. 17.

Other promotional items, such as brochures, yard and site signs, and outdoor pennants carrying the Empire E Home Logo will be offered to participating builders to assist them with their marketing efforts at the point of sale when building homes to meet the E Home Program standards.

## THE EMPIRE DISTRICT ELECTRIC COMPANY

Sec. 4 Original Sheet No. 17  
Cancelling P.S.C. Mo. No. \_\_\_\_\_For ALL TERRITORYNo supplement to this tariff will be issued except  
for the purpose of cancelling this tariff.Sec. \_\_\_\_\_ Revised Sheet No. \_\_\_\_\_  
Which was issued \_\_\_\_\_**E HOME  
COMFORT GUARANTEE**

This is to certify that the individual identified below and owning the home identified herein (Customer) is entitled to the benefits of The Empire District Electric Company's E Home Comfort Guarantee. In order to qualify for this guarantee, the Customer's home must be certified as an Empire E Home. In addition, the electric central air conditioning system (System) installed in the home must have a SEER of 12.0 or greater and must be sized within 1/2 ton of the cooling load calculated by Empire. This calculation will be done using a Manual J based method, with summer design temperature of 100 degrees outdoors and 75 degrees indoors. In addition, all ductwork must be sized to provide adequate airflow in accordance with the equipment manufacturer's specifications.

Empire guarantees Customer's satisfaction with the cooling comfort provided by the electric central air conditioning system installed in the Customer's E Home. Electric central air conditioning system is defined as any system that is electric and provides central air conditioning. If, at the end of the twelve month period following occupancy of the home, Customer is dissatisfied with the cooling comfort provided by the System due to equipment sizing, and if Customer's dissatisfaction is not resolved within a reasonable time not to exceed 90 days, Empire will convert the System within a reasonable time, subject to the following conditions and provisions:

1. Within 30 days after the end of the twelve month period following occupancy of the home, Customer must notify Empire in writing of Customer's intent to exercise this Comfort Guarantee.
2. If Customer exercises this Comfort Guarantee, Empire will pay for the electric central air conditioning equipment and installation costs relating to the installation of a new system of the same type, sized according to the Customer's wishes. The new system will be specified, provided, and installed by a dealer which is mutually acceptable to Customer and Empire. Any Customer-owned equipment replaced under this guarantee and no longer used in the new system shall become the property of Empire and may be removed by Empire or its agent.

The Empire District Electric Company makes no other guarantees with respect to the system and has no further obligations hereunder. In addition, Empire expressly disclaims any and all warranties, including the warranties of merchantability and fitness for a particular purpose.

Customer acknowledges the terms and conditions of The Empire District Electric Company's E Home Comfort Guarantee by signing below.

Comfort Guarantee Customer \_\_\_\_\_ Account No. \_\_\_\_\_

Address \_\_\_\_\_ City, State, Zip \_\_\_\_\_

Date home is occupied \_\_\_\_\_

Customer Signature \_\_\_\_\_

To exercise this guarantee, Customer must notify Company in writing by \_\_\_\_\_  
(Date)\_\_\_\_\_  
The Empire District Electric Company\_\_\_\_\_  
(Date)

## THE EMPIRE DISTRICT ELECTRIC COMPANY E HOME PILOT PROGRAM

### INTRODUCTION

The Empire District Electric Company is proposing to implement the following E Home Pilot Program for new and existing residential customers. This program will be available for a period of two years from its effective date. We plan to achieve these key objectives over the duration of this pilot program:

- \* Introduce a new home program that will give Empire a leadership role on energy efficiency and environmental issues
- \* Provide Empire with experience in promoting demand-side measures to our residential customers
- \* Test the effectiveness of this program for achieving DSM goals for efficiency and demand reduction.

We plan to offer technical assistance and a comfort guarantee to qualified residential customers in order to develop the market for this measure.

The E Home Program will benefit customers and Empire in the following ways. It offers customers an opportunity to live in homes that exceed the typical baseline home in the areas of energy efficiency and environmental quality. It also offers customers an opportunity to reduce their energy usage, lowering energy cost. The program will benefit Empire by providing a method of achieving DSM goals for efficiency and demand reduction.

### PROGRAM SCOPE

The E Home Program will establish minimum standards for energy efficiency of both the building envelope and the equipment used in the home. A set of HVAC Quality Installation Standards will also be incorporated into this program. In addition, the program offers recommendations regarding indoor air quality, environmental awareness, and use of solar energy.

In order to be certified as an Empire E Home, the minimum standards for the envelope and equipment, as well as the HVAC Quality Installation Standards, must be met. Participating customers will also be encouraged to incorporate features into their homes that contribute to improved indoor air quality, environmental awareness, and the use of solar energy. These standards and recommendations are found in the Empire E Home Implementation Manual.

### MARKETING PLAN

The publicity campaign for this program will include media advertising, program brochures, and mail-outs to trade allies emphasizing the benefits of the E Home. These materials will be developed through a combined effort of the Marketing and Load Management Department and the Public Information Department. An 800 number has been established for customers to call to obtain information about the program. After the customer receives the information, one of our Customer Service Consultants will follow-up with the customer to answer further questions and provide additional program information. In addition, meetings will be held with interested consumers and with trade allies, including builders, HVAC dealers, Realtors, real estate appraisers, and mortgage lenders, to introduce the program and discuss the numerous advantages of the E Home. Direct, one-on-one contact with these trade allies will also be an important method of marketing this program.



Items such as brochures, yard and site signs, and outdoor pennants carrying the Empire E Home Logo will be offered to participating builders to assist them with their marketing efforts at the point of sale when they build homes meeting the E Home Program standards.

#### PROGRAM DELIVERY AND VERIFICATION

The Empire E Home Implementation Manual will explain the use and application of the established procedures. This manual will serve as a guide for Empire employees working with the program, as well as for key trade allies including builders, remodelers, developers, contractors, and Realtors.

A customer who wishes to have a home certified as an Empire E Home should notify his/her local Customer Service Consultant or Technical Consultant at the beginning of the construction or remodeling process. The Consultant will make sure the customer has a copy of the Empire E Home Implementation Manual, and understands the standards and procedures described in the manual. The Consultant will conduct compliance verification checks as needed at various stages of the construction or remodeling process to assure that all of the program standards have been met. A minimum of two verification checks (pre-drywall and post-drywall) will be necessary to verify program compliance. The final inspection of the HVAC system will be performed by a Technical Consultant. A compliance checklist will be used to assist the Consultants in this verification process.

#### COMFORT GUARANTEE

Once it has been verified that the appropriate standards have been met, the Consultant(s) will certify the home as an Empire E Home. If a new electric central air conditioning system with a SEER of 12.0 or greater and sized within 1/2 ton of the cooling load calculated by Empire is installed in the home, Empire will then offer to the owner of the certified home an "E Home Comfort Guarantee". The guarantee provides that if, after twelve months, the customer is dissatisfied with the cooling comfort provided by the electric central air conditioning system due to equipment sizing, and if the customer's dissatisfaction is not resolved within a reasonable time, Empire will convert the system to a new system of the same type sized according to the customer's wishes, subject to the terms and conditions of the guarantee.

#### PROGRAM TRACKING AND REPORTING

Empire will maintain records of the customer, building or remodeling contractor, and HVAC installer for all certified homes within the Marketing and Load Management Department. This information, along with the compliance information, will be collected by the inspecting consultant. Factors regarding the program process and marketing activities, such as key problems encountered by participating trade allies, successful techniques, barriers to participation, and customer satisfaction will be recorded and evaluated to enhance the program. This information will be obtained through employee, customer, and trade ally interviews.

All the information on the compliance checklist regarding measures installed will also be recorded and used in the program evaluation.

#### PROGRAM EVALUATION

Throughout the duration of this pilot program, savings verification will be accomplished through simulation, billing analysis, and the use of load recording meters. A sample of the certified homes will be simulated using models such as EPRI ESPRE 2.1 to estimate savings. The results of these simulations will be compared to the metered results in order to calibrate the models to a high degree of accuracy and reliability. Billing analyses will also be performed to compare actual energy impacts to the energy impacts predicted in the simulations.

Simulation, metering, and billing analysis will also be used to verify customer benefits and contribute to our evaluation of projected program participation rates.

The information collected regarding the program process and marketing activities will also be evaluated during this pilot program in order to help Empire implement and administer the program in the most effective manner possible. If participation warrants, customer focus groups will be held with program participants. Separate focus groups will be held for a sample of those who expressed interest in the program but elected not to participate. The purpose of these focus groups will be to obtain information regarding various aspects of the E Home program, including reasons for participation or non-participation in the program. We will also attempt, through these focus groups, to obtain information to contribute to our evaluation of the load building potential of the program. In order to assure that the information collected is as accurate as possible, any focus groups held will be conducted by a third party. If participation is not sufficient to warrant conducting focus groups, Empire will attempt, through other methods, to determine the reasons for low program participation.

In addition, Empire will conduct formal program evaluations to confirm the cost effective delivery of the program. This information will be fed directly into DSManager 2.0 to evaluate the cost effectiveness based on actual program costs and impacts. An attempt will also be made to evaluate the effects of the program on Empire's summer and winter peaks.

While this program is intended to provide a method of achieving DSM goals for efficiency and demand reduction, and is not intended to be a load building program, we will attempt to evaluate whether or not the program has any measurable effect on heating fuel choice. In addition to the aforementioned focus groups, we will use the following methods in this attempt. Electric heating market share in the residential class is reported monthly by our Customer Service Consultants in each district. We will compare the market share percentages, by district, after the E Home Comfort Guarantee is in effect to the percentages reported before the Guarantee was offered.

Additionally, we will compare the number of certified E Homes in which electric heating equipment is installed to the number of certified E Homes in which some other heating fuel is used. This ratio will then be compared to the overall electric heating market share in an attempt to ascertain program effects. For electrically heated E Homes, the availability of other fuels will also be taken into account.

Moreover, we will include questions regarding program effects on heating fuel choice in questionnaires which will be sent to E Home customers after they have occupied their homes for a period of time.

# C O N T E N T S

INTRODUCTION 2

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THE HOME



THE EMPIRE DISTRICT  
ELECTRIC COMPANY

# *i* N T R O D U C T I O N

**PURPOSE** The purpose of Empire's E Home Program is to encourage the efficient use of electric energy in new residential construction through improved design and construction techniques, and the use of high efficiency heating and cooling equipment and appliances. We believe that by following the standards and recommendations herein, you will have a home that is more energy efficient, more comfortable, has better indoor air quality, and is friendlier to our environment than most homes in our area. We believe it is essential that we all do our part to conserve our energy resources and take care of our environment, and that this can be accomplished without sacrificing comfort or costing more money.

**CERTIFICATION** In order to qualify for Empire's E Home certification, the minimum standards for the building envelope and equipment, as well as the HVAC Quality Installation Standards, must be met. You are also strongly encouraged to incorporate into your home the recommended features that contribute to indoor air quality, environmental friendliness, and the use of **solar** energy. For further details on how to obtain E Home certification, contact your local Empire representative before construction of your home or remodeling project begins.

# S P A C E C O N D I T I O N I N G E Q U I P M E N T \*

✎ Electric central air conditioning equipment with a SEER rating of 12.0 or higher must be installed in the home.

✎ The air conditioning equipment shall be sized within 1/2 ton of the cooling load calculated by Empire, and the installation must meet Empire's HVAC Quality Installation Standards.

✎ The entire supply and return duct system shall be constructed so that all joints and connections are completely sealed using duct mastic.

✎ Whenever possible, duct work should be furred in and installed within the conditioned space to minimize duct gains or losses.

\* No specific type of heating source is required for E Home certification.

# *r* E C O M M E N D A T I O N S

While the following recommendations are not mandatory to achieve The E Home certification, they will contribute to indoor air quality, environmental friendliness, and the use of *solar* energy.

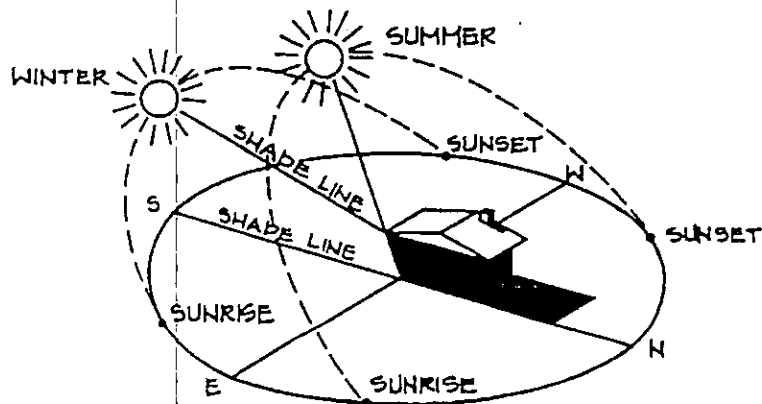
We strongly encourage you to consider all of these suggestions for improved quality of life, lower cost of living and reduced stress on our mutual home, planet Earth.

# *e* N V I R O N M E N T A L A W A R E N E S S

- ✧ Use cellulose insulation, which is made primarily from recycled newspaper.
- ✧ Install low-gallon flush toilets, or install toilet dams in standard toilets.
- ✧ Install low-flow shower heads, limiting water usage for showers to 2.5 gallons per minute.
- ✧ Make recycling more convenient by installing built-in recycling bins.
- ✧ Reduce landfill volume by installing a trash compactor.
- ✧ Install composting bins for organic yard waste.

# SOLAR ENERGY

☛ A three-foot overhang over all south facing windows will shade the windows in the summer but allow the winter sun to enter the house.



☛ Locate major living spaces along the southern portion of the home where south facing windows offer a source of winter heat. Proper site orientation, especially in conjunction with passive solar design, offers the opportunity for substantial energy savings and should be considered.



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Case No. EO-95-4

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