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ENERGY EFFICIENCY: ENHANCING HOME PERFORMANCE
 PROGRAM FIVE
 “New York ENERGY STAR® Labeled Homes”

INTRO TEASER (HOST):

Hi I’m [Mark Mason](#). Are you building a new home or thinking of building in the near future? Today we’ll show you how to build a home for the future – by building a New York ENERGY STAR® Labeled Home. New York ENERGY STAR® Labeled Homes are 30% more efficient than standard new homes built to code. Proven technologies and advanced building practices ensure that your home is as energy-efficient as possible. Homes of any style or size can be built to the New York ENERGY STAR® label standards and these homes must pass a stringent evaluation before they [can](#) earn the ENERGY STAR® label.

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Underwriting

Funding for “Energy Efficiency: Enhancing Home Performance” is provided by: New York State Energy Research And Development Authority, using innovation and technology to solve some of New York State’s most difficult energy and environmental problems in ways that improve the state’s economy.

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HOST:

Any home in any style or price range can be built to ENERGY STAR® standards. Building your house to building code standards does NOT mean you’re building a New York ENERGY STAR® Labeled Home. The building requirements for New York ENERGY STAR® Labeled Homes are far superior to those of standard building code. These homes typically use 30% less energy with improved comfort and air quality. Surprisingly, however, these homes cost less to own and maintain, and are much more friendly on the environment.

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But what goes into building a New York ENERGY STAR® Labeled Home? How is it different from a house built simply to standard building code? Here to tell us more [are Kris Carr, a participating builder in the New York ENERGY STAR Labeled Homes Program, and Ellis Guiles, a Home Energy Rater.](#)

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ELLIS:

Building a ENERGY STAR® Labeled Home is no more difficult than building a standard home. But building a New York ENERGY STAR® Labeled Home means incorporating a whole series of energy saving features, including increased insulation levels, high performance windows, high efficiency heating and cooling systems, and [ENERGY STAR® labeled](#) appliances and lighting.

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KRIS:

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And New York ENERGY STAR® Labeled Homes are inspected and tested to meet strict certification requirements. If your home passes, you will actually get a plaque to place on your home that shows that this house, indeed is a New York ENERGY STAR® Labeled Home.

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ELLIS:

I tell you what, why don't you take us through a New York State ENERGY STAR® Labeled Home under construction? We'll show you what we mean by this.

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KRIS:

Will do! Come on!

(TRANSITION)

HOMEOWNER INTERVIEW : Ben and Regina Budelmann:

(41:53:00) (Regina) I've always been a fanatic about efficiency, and I hate waste. And it seemed in this day and age, with everything that's going on in our country, it seemed to be the only thing to do.

HOMEOWNER INTERVIEW: Catherine Jahncke:

(27:43:00) The savings for an ENERGY STAR home over the lifetime over the home is probably going to compensate for any extra costs incurred in building the ENERGY STAR home, plus for comfort level, for living in the home, and it just seemed the responsible thing to do in terms of concern about the environment and usage of natural resources.

ELLIS: (Basement)

Let's start with the foundation. It's not required that you have a basement or a foundation in order to be a New York ENERGY STAR® labeled home, but in our cold climate, with our winters, It's not unusual for people to put a basement underneath their house. So if you're going to put a basement in, there are several things that you need to be thinking about, and consider, before doing this. Aside from structural concerns, the most important aspect of the design is to make sure that moisture doesn't get into your basement. You certainly don't want any mold or mildew growth, or a wet basement underneath your house. So the best way to ensure your foundation stays dry most of the time is to put in proper drainage and capillary breaks. Now a capillary break is a barrier between the soil foundation and the slab. It prevents water from moving through the soil into the walls and eventually into your basement, which can lead to mold or mildew growth. You also want to slope the ground surfaces away from the foundation as well.

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Deleted: most people choose to build a basement under their home. If you choose to go that route, there are several things to think about.

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Deleted: for foundation design is moisture. No one wants a wet or damp basement. And certainly, no one wants mold in their basement. So, the best way to ensure that a foundation stays dry most of the time is to include proper drainage and capillary breaks. A capillary break is a barrier between the soil under the foundation slab and the slab. It prevents water from moving from the soil into the walls and floors, which can lead to mold growth. You'll also want to slope ground surfaces away from the foundation.

KRIS:

You also have the choice of building a conditioned or unconditioned basement. If you plan on using your basement, whether finishing off for living space, whether for projects, storage, or just for laundry, you'll probably want the space to be heated. You'll want to build a conditioned basement for that. In a conditioned basement, the walls are insulated. Conditioned basements are less likely to have condensation and related mold and mildew problems than a cold basement.

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ELLIS:

What about over here, where the house actually sits on the foundation? Rim joists are notorious places of air leakage and infiltration [into a house](#).

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ELLIS:¶

KRIS:

In a New York ENERGY STAR® Labeled Home, rim joists are also carefully insulated, and any air penetrations around pipes, electrical cables, and ducts are sealed. Openings where pipes and cables enter joists and other various parts of the house are [often](#) places where air [can leak into or out of a home](#).

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Transition to: ELLIS Foam Sealing 3 (house under construction) (:30)

Every home that's built has a certain number of penetrations caused by the electrical, plumbing, heating, and cooling systems that are put into the house. In every ENERGY STAR® house, we want to make sure we seal those penetrations to stop air movement. You'll notice about this electrical panel, we've sealed where all the wires have gone through the framing members. This allows us to stop air movement from top to bottom and from bottom to top in the house. It's really important that we do this. We don't want unnecessary air movement in the house that will raise your energy bills and lower your comfort.

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Transition to: ELLIS (2) Foam Sealing – Windows (house under construction) (:20)

Another place we can have air infiltration around the house is around the windows. You'll notice these particular windows have been sealed with an expanding foam insulation around them. This is the preferred method in an ENERGY STAR® home, instead of using a bat insulation. This will do a much better job with the expanding foam, of stopping the air infiltration around the windows. It's a great thing to do for every home that's built.

ELLIS:

So, in an ENERGY STAR® Labeled Home, the cellar is insulated and all possible sources of air infiltration, like electrical outlets, plumbing pipes, and windows are carefully sealed. But what about the ductwork? [Anything special going on there?](#)

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Deleted: I noticed that has special insulation, too.

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Deleted: Today we're going to use the process known as Aero-Sealing, which seals the duct work from the inside, rather than the outside.

Deleted: We've attached the duct work from our aero-sealing process to the supply side of the unit into the return side down in the furnace, so that we've isolated both the furnace and the indoor coil from the process, because we don't want to get compound in those, it'll clog them up.

Deleted: It'll take about 15 to 20 minutes now that we've got the system set up to actually

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Deleted: get the process completed, and when we're done, we'll do some more testing to make sure that we've achieved our leakage rates that we're looking for.

KRIS:

In many new homes, the duct work leaks like crazy. So you end up losing heat to your attic, your basement, or simply heating the outdoors. In fact, the national average is about 25% of your heat is lost through leaky ductwork. The outside seams on the ducts can be sealed with a mastic compound – not duct tape, mind you, as that really doesn't seal very well. But a better method is sealing the duct work from *inside* the duct work.

Transition to: ELLIS: (2) Duct Sealing (house under construction) 1:05

We're set up here today to do duct sealing, which is required of every new ENERGY STAR® home, in fact, of every new home built in New York State, by building code. (edit) And what we're going to be doing, is dispersing an aerosolized compound which will adhere to all the cracks and crevices, effectively sealing them off so that air can't get out of the duct work when we're done with this. (edit) When we're done today, we're looking to reduce the air flow loss through the system to as little as 45 cubic feet per minute. Which is a very small amount; it'll be less than 5% of the design airflow of the system when we're done today.

ELLIS:

So sealing all the electrical, plumbing, and duct penetrations is really important in a house to make sure we keep air inside the house where we want it during the wintertime, and that we keep it out of the house during the summertime. That way we'll keep our houses more comfortable. But what do we do about the rest of the house? Well, in those areas, we want to make sure that we get the house well insulated.

Now, there's a variety of types of insulation. There's fiberglass, regular batt fiberglass, there's also blown fiberglass, there's wet spray and blown cellulose, there's a variety of sprayed foams and there's also a rigid board insulation. But the key to all those products is proper installation. You want to make sure they get put in right. In ENERGY STAR® labeled homes, we use higher R values in the wall and ceilings and basement assemblies to make sure that the homes perform better. Now it's really important to make sure we get the right R values. An R value is nothing more than a measurement that tells us how fast heat moves through a wall structure or ceiling structure. And actually a higher R value is better, it means that the heat moves slowly through the house. And so we want to make sure that we use as high an R value as possible. That way we're going to keep the heat in the house in the winter time, and we're going to keep it out of the house in the summer time.

KRIS:

Cellulose insulation is made out of recycled newsprint treated with a fire retardant. It's great for filling in gaps left between batt insulation and wall or ceiling joists. **Foam insulation**, usually spray polyurethane or spray polyisocyanurate, is environmentally safe and does a great job for filling holes and gaps. It also has excellent insulation values and stops air movement.

Rigid board insulation can be used in almost any part of your home, from the roof down to the foundation. They reduce heat conduction through structural elements, like wood and steel studs. Fiberglass **batts** are the probably most common form of insulation, but must be installed very carefully to avoid leaving gaps. It takes high performance insulation, good air sealing procedures, and proper installation to make sure insulation performance is at optimum levels. This sets New York ENERGY STAR® Labeled Homes apart from conventionally built ones.

Transition to: Ellis (2) Insulation Installation (house under construction) (:20)

We're looking at the insulation installation in this home to see if it qualifies for an ENERGY STAR® rating. This one, I would say it does, it's an excellent job of making sure the seams overlap and there aren't any rips or tears or compression in the installation, that would cause it not to work properly.

KRIS:

How does a building rater know if the insulation is installed properly?

ELLIS:

Every ENERGY STAR® Labeled Home is inspected with what we call a Thermal Bypass Inspection. And as part of that, we do a couple things. We gauge to make sure the insulation has been installed properly, so we're looking for gaps, tears, rips, misalignment, and when we find those, we go back to the builder and tell them where they need to make corrections. We're also looking to make sure that the thermal and pressure boundaries line up in the house, and that there aren't any disconnects there, because later on, when we do the blower door test, which is how we

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Deleted: are a whole range of insulation options, including traditional fiberglass, blown or damp sprayed cellulose, sprayed-in foams, or rigid board insulation. The key

Deleted: And it's crucial to use the right insulation in the right places. ENERGY STAR® Labeled Homes use insulation with high R-Values. R-Values measure the efficiency of the insulation. The higher the R-Value, the less air that can pass through it,

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test to see just how tight the house is, we want to make sure we're not having to tear the house apart to go back in and make those kinds of corrections.

Deleted: during the construction process and tested to make sure it meets specifications. One performance test we do is called a 'blower door test,' which verifies low leakage rates. We also test each exterior wall with a thermal imaging camera, which allows us to see hot and cold spots in the walls. And we also pressure test.

Transition to: ELLIS: (2) Checking air leakage (new house) (:46)

We're testing for duct leakage to the outdoors. Now that may seem a little strange; why would we want to see how much air is leaking out of the duct work to the outside of the house? We want to know that because it impacts how well the heating and cooling systems will perform, if we can't deliver that air to the house where it needs to be. So we've done the test setup and we're looking to see where we're at. ENERGY STAR® homes require that you not have more than 6 cubic feet per minute per hundred square feet of leakage to the outdoors. For this particular house, that translates into about a hundred and twenty cubic feet per minute of leakage to the outdoors. As you can see when you look at our meter, we're pretty close to that number. We're at about a hundred and fifty to a hundred and sixty CFM. So we've got a little bit of work that we have to do to the duct system in this house, but we're really close. Generally, I'd say that this is a pretty good house right here.

KRIS:

So, that's how you keep the heat in, with proper insulation and sealing. But what about the heating and cooling systems, themselves? Well, that's where you can save even more money.

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ELLIS:

No matter what heating fuel you decide to go with – fuel oil, propane, natural gas, or even electric, you'll want to install a furnace or a boiler with the ENERGY STAR® Label. ENERGY STAR® qualified heating systems use 30% less energy than systems built even as recently as 10 years ago. The same is true for ENERGY STAR® Labeled air conditioning units.

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KRIS:

So, with an ENERGY STAR® Labeled Home, you'll save more money – and energy – year round.

(TRANSITION)

HOMEOWNER INTERVIEW: Kathleen Buckley:

(7:00:00) We did incur some additional costs, the double insulated walls, the windows are more expensive, and the slab, the concrete slab, this house sits on a slab, is thicker than the normal concrete slab. But those were costs that we knew we were going to incur. And decided that this was important long-term to save money.

HOMEOWNER INTERVIEW: Ben and Regina Budelmann:

(54:29:00) (Ben) The bottom line is we're using a lot less energy and we're using a lot less fuel than when we, if we hadn't met those specifications.

(Music montage: Green Hammer Construction laying in foundation)

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ELLIS:

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Now when we build a home like this, the idea is to build tight, ventilate right. What does that mean?

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KRIS:

It means that the home is not only properly insulated and well sealed, sealed, but that special attention is taken to ensure that the house has is continuously supplied with fresh air. In this house, we use an ENERGY STAR® bath fan to continuously exhaust air and help reduce common household contaminants. In fact, homeowners say they experience fewer colds and less allergy symptoms as a result of continuously breathing fresh air.

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ELLIS:

So, the combination of properly sealing, insulating, and ventilating, and correcting sizing the heating and cooling systems, makes our ENERGY STAR® Labeled Home much more comfortable to live in.

KRIS:

That's right. The upstairs rooms won't be too cold in the winter and too hot in the summer. They'll be just right! But there's even more to an ENERGY STAR® Labeled Home. Let's head outside!

(TRANSITION)

HOMEOWNER INTERVIEW: Catherine Jahncke:

(38:34:00) I couldn't be happier with my ENERGY STAR home. It is a dream come true. The comfort, the energy savings, it's fabulous.

HOMEOWNER INTERVIEW: Kathleen Buckley:

(7:56:00) We think that this is a home that will be around for a long time, even if we weren't in it, so the hope is that this will really have um, a significant impact in terms of being a responsible and sustainable home. And not take a lot of the world's resources.

(Montage of putting in a window, with music)

Deleted: (Upstairs, by window)

ELLIS:

Windows and doors typically lose from 15 to 40% of total heating and cooling energy in an average home. In this New York ENERGY STAR® Labeled Home, we use well-insulated doors and ENERGY STAR® qualified windows with low-E glass to help keep the heat inside in the winter and outside in the summer. And of course, when they're installed, they're carefully sealed with foam sealant around the frame.

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Transition to: ELLIS: windows, doors, skylights at a store

The energy performance of all ENERGY STAR® qualified windows, doors, and skylights must be independently tested and certified. The National Fenestration Rating Council, or NFRC, is the body responsible for this. They've established minimum performance criteria for all of these items. The U-Factor tells us how well the window insulates. The lower the U-Factor, the better

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the window insulates. The Solar Heat Gain Co-efficient tells you how well the product blocks heat caused by sunlight. Visible Transmittance measures the amount of light the window lets through. Air leakage measures the rate at which air passes through the cracks in the window. And Condensation Resistance measures how well the window resists water buildup. The ENERGY STAR® Label helps identify NFRC certified products with superior energy performance.

What makes a window, door, or skylight energy efficient? Improved frame materials with a tighter fit and better weather stripping reduce heat transfer and help insulate better. Low-E glass is specially coated to reflect infrared light, keeping heat inside in winter and outside in summer. They also reflect damaging ultraviolet light, which helps protect interior furnishings from fading. ENERGY STAR® qualified windows, doors, and skylights also include at least two panes of glass – some with three or more – with an air or gas filling the space in between for better insulation, increased impact resistance, and sound insulation.

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(Back at house, by windows) ELLIS:

So, superior windows, doors, and skylights with the ENERGY STAR® label on them; properly installed insulation, properly sealed ductwork, and air penetrations, ENERGY STAR® qualified heating and cooling systems with proper ventilation ... but that's not all there is to an ENERGY STAR® labeled home.

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KRIS:

By no means! We haven't even touched on the appliances yet. Let's go to the kitchen. I'll show you what we've done.

HOMEOWNER INTERVIEW: Ben and Regina Budelmann:

(55:57:00) (Ben) Personally, I'm very satisfied with it. It's worked for us and it's taught us how to be more energy efficient as well. Just the experience of it and we're going to get better at it. For sure I'd recommend everybody who can do something like this should.

(Music montage with installation of dishwasher)

(In the kitchen)

ELLIS:

Wow, this is beautiful. But what's different?

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Deleted: qualified fixtures, and on the outside, look no different than a regular fixture. In fact, they come in a wide variety of styles. But inside, they are a little different. Instead of your traditional screw-in light bulb, you use a light bulb with two pins in the bottom. And boy, do they save energy!
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KRIS:

We use high efficiency ENERGY STAR® labeled lighting that can save up to 75% of the electricity typically used to light your home. Now on the outside, these fixtures don't look any different than your traditional ones, and actually come in a wide variety of styles, but on the inside, that's where they're different. Instead of the typical screw-in lightbulb, we now use a lightbulb with two pins, and combined, they can save a lot of energy.

ELLIS:

And so do the appliances! You'll notice they all have the ENERGY STAR® Label on them. The refrigerator, for example, uses a lot less energy and has all the features you want. It can save over \$100 a year as compared to the normal refrigerator these days. You can get an ENERGY STAR® qualified refrigerator in a number of styles, including top freezer, bottom freezer, side-by-side, and French door. Any way you get it, you're going to save yourself a lot of money.

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 ELLIS:
 That's right. It ... [1]

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KRIS:

The dishwasher is also ENERGY STAR® qualified. An ENERGY STAR® dishwasher can save you 41% over a non- ENERGY STAR® model built to the federal minimum standard for energy. An ENERGY STAR® dishwasher has better insulation, a more efficient motor, and uses less water – approximately 1200 gallons less per year. That's about six times the amount of water the average person drinks in a year.

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ELLIS:

You'll notice this ENERGY STAR® Label on this clothes washer. An ENERGY STAR® qualified clothes washer can save you up to \$160 per year on your utility bills! It will use up to 80% less energy and approximately 60% less water than pre-1994 models.

(Montage of appliances, with music)

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ELLIS:

That's amazing. But don't all these improvements make an ENERGY STAR® Labeled Home more expensive to own?

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KRIS:

Believe it or not, the home actually costs less once you move into your home. Let's say the mortgage costs \$25 more a month for an ENERGY STAR® Labeled Home. Typically you will save \$45 a month on your utility bills, generating a net savings of \$20 per month. So it's an investment that starts to pay for itself right away. Or, you can take that \$20 a month, invest it back into your mortgage to pay for some of those extras, like kitchen cabinet upgrades, hardwood floors, or even a deck. The energy savings from your ENERGY STAR® Labeled Home pays for the extras.

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ELLIS:

And you know when you build an ENERGY STAR® Labeled Home, that everything will be done correctly because it must pass a computer-based analysis, stringent field verifications, and a number of certification tests. The builder's construction crews are also checked with their work. We look to see that they're performing everything to standards that we're checking to, making sure that the quality and attention to detail is there for you. Home Energy Raters inspect insulation in the field to make sure it's installed properly, we perform tightness tests on the house, both the shell and the envelope and duct systems if you happen to have a forced air system, and we ensure that all the other energy efficient features are in the home, such as ENERGY STAR® labeled appliances, lighting, and bath fans. We want to make sure it's all been installed properly for you. Most builders will tell you that they build energy efficient homes. But builders whose homes earn the ENERGY STAR® can back up their claims. Once everything has been completed and tested to the Home Energy Rater's satisfaction, a certificate

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is issued from the Residential Energy Services Network Provider, that identifies your home as an ENERGY STAR® labeled home. If you need more information, you can go to getenergysmart.org or call New York's Energy Smart Program at 1-877-NY SMART for additional details.

KRIS CARR: Fort Drum ACTUS Lend Lease Interview 6: (:21)

Fort Drum Mountain Community Homes as the showcase effort in sustainability, chose to certify all of our homes in the New York State ENERGY STAR® Labeled Homes program. This was a tremendous win, not only for ACTUS and Fort Drum Mountain Community Homes, but also the army, and most importantly, for our heroes and soldiers who are going to live in these homes.

KRIS CARR: Fort Drum ACTUS Lend Lease Interview 1: (:14)

ENERGY STAR® and sustainability is very important to us as a developer. These homes have to be maintained by us for a period of 50 years. So building homes that will last and are energy efficient is very important.

ANN HEIDENREICH, Community Energy Services:

(46:48:00) The ENERGY STAR labeled homes are 30% more efficient than code. You need to get in touch with the rater at the time when your design is, you know, when you have your engineer drawings, the home energy rater will look at the design and let you know how you can tweak it this way or that way to get to improve the efficiency of the home. And then the rater will also work with the builder so that the builder knows all about what to do. And then at the end of the whole process, the rater comes in and does a blower-door test, checks to make sure everything is done accordingly. And then you get this better rating, you get a few things to put in your house, a mat, and a plaque. And there are some incentives in particular for the builders.

ELLIS:

So, just to recap ... ENERGY STAR® Labeled Homes have ENERGY STAR® windows, doors, skylights, lighting fixtures, and appliances, and have very high efficiency ENERGY STAR® heating, cooling, and water heating systems. In addition, the home is insulated, sealed, and ventilated to very stringent efficiency standards, so they're comfortable to live in. And it's at least 30% more energy efficient than a home built to current building codes.

KRIS:

And by earning the ENERGY STAR® label, the home is more valuable, too. The stringent testing that a home must pass ensures that the house will perform efficiently and effectively and will therefore generate energy savings for years to come. This generally means that the resale value is higher than a comparable non-ENERGY STAR® labeled home. And any home, no matter how big or small, or in any style, can be built to earn the ENERGY STAR® Label.

JOHN MCCLOSKEY, Green Hammer Construction:

4:39:00 I don't personally find that it's any more difficult to build an ENERGY STAR® house. It requires more planning and it requires knowledge of building science and knowledge of how the house works as a system. It takes some more thought, it takes training. (3:44:00) We have a house that's warm everywhere, not just near the furnace or just near the furnace outlets. We have a house that's comfortable, we have a house that's safe because it's been tested for carbon

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monoxide production, we know that the appliances are going to function properly because they've been designed into the house as a whole. And ... it's easier on the environment.

KRIS CARR Fort Drum ACTUS Lend Lease Interview 7: (:20)

Building green, as one frog once said, is not easy. But the paybacks, and the rewards, for building energy efficient homes, and building sustainable homes, is just tremendous. And I would say to any contractor out there, do your research, get educated, and build green.

KRIS CARR Fort Drum ACTUS Lend Lease Interview 5: (:23)

Some of the biggest advantages to an ENERGY STAR® home is that it's going to live like a house is supposed to live. It's going to be more comfortable in both the winter, and the summer, it's going to cost less money to operate, to heat and cool, you'll have better mechanical systems in it, less likely that your roof is going to leak due to ice buildup, which is tremendously important, especially after the snowfall that we had this winter.

JEFF LOOMIS (Home Energy Rater):

The customer is getting a more durable home, a more comfortable home, a more energy efficient home, that actually will cost them less to own. It's a win-win situation.

HOST:

Well, I've got to tell you, I'm convinced! As an ENERGY STAR® Labeled Home owner, I'll save money every year I own the home. It uses less energy, it's more comfortable, it's healthier, and generally, it's more valuable. If you're a contractor, becoming a New York ENERGY STAR® Labeled Homes builder is one of the best steps you can take to grow your business. And it's easy to become one. Just call 1-877-NY SMART or log on to getenergysmart.org for more information.

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And keep in mind that New York ENERGY STAR labeled homes stand out among the best in the country. New York has higher health and safety requirements and more stringent energy standards than most other states. New York ENERGY STAR labeled homes provide a continuous supply of fresh air, giving the homeowner peace of mind that the home is safe from things like carbon monoxide, mold, and household allergens. All this adds up to a home with higher safety and comfort levels. It's no wonder that since the program's inception, over 11,000 New York ENERGY STAR Labeled Homes have been built, and that number increases dramatically each year.

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HOST (OUTRO):

Today we've shown you how New York ENERGY STAR® Labeled Homes stand above the rest. We've shown how they are more energy-efficient, comfortable, and safe. So if you're in the market for a new home, make sure it's built to New York ENERGY STAR® standards. It will save you money in the long run and give you the peace of mind of lower energy bills each month for years to come.

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Underwriting

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some of New York State's most difficult energy and environmental problems in ways that improve the state's economy.

CREDITS

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Kris Carr, Fort Drum Mountain Community
Homes, Fort Drum, NY

Special Thanks To

ACTUS Lend-Lease Program at Fort Drum

Nick Cooney

Mindy Miller

Home Depot

Eric Hardy

George and Darlene Galek

Deltra Willis

Green Hammer Construction

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Watertown, NY
Wpbstv.org

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Peter Clough¶

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James and Dorothy DuFlo¶
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Philip Showen¶
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ELLIS:

That's right. It

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ENERGY STAR

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from the day you move in.

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if

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put

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, you'll be able to afford those extras,

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such as

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But

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how do I

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every ENERGY STAR® Labeled Home must pass a co

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inspections, and

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know that their work will be tested for performance, quality, and attention to detail.

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installation, perform tightness tests on the home's envelope, or shell, and duct system, and ensure that all energy-efficient features and equipment are properly installed in your home.

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KRIS CARR Fort Drum ACTUS Lend Lease Interview 6: (:21)

Fort Drum Mountain Community Homes as the showcase effort in sustainability, chose to certify all of our homes in the New York State ENERGY STAR® Labeled Homes program. This was a tremendous win, not only for ACTUS and Fort Drum Mountain Community Homes, but also the army, and most importantly, for our heroes and soldiers who are going to live in these homes.

KRIS CARR Fort Drum ACTUS Lend Lease Interview 1: (:14)

ENERGY STAR® and sustainability is very important to us as a developer. These homes have to be maintained by us for a period of 50 years. So building homes that will last and are energy efficient is very important.

BUILDER INTERVIEW: (Need to shoot)

4:39:00 I don't personally find that it's any more difficult to build an ENERGY STAR® house. It requires more planning and it requires knowledge of building science and knowledge of how the house works as a system. It takes some more thought, it takes training. (3:44:00) We have a house that's warm everywhere, not just near the furnace or just near the furnace outlets. We have a house that's comfortable, we have a house that's safe because it's been tested for carbon monoxide production, we know that the appliances are going to function properly because they've been designed into the house as a whole. And ... it's easier on the environment.

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KRIS CARR Fort Drum ACTUS Lend Lease Interview 5: (:23)

Some of the biggest advantages to an ENERGY STAR® home is that it's going to live like a house is supposed to live. It's going to be more comfortable in both the winter, and the summer, it's going to cost less money to operate, to heat and cool, you'll have better mechanical systems in it, less likely that your roof is going to leak due to ice buildup, which is tremendously important, especially after the snowfall that we had this winter.

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Building green, as one frog once said, is not easy. But the paybacks, and the rewards, for building energy efficient homes, and building sustainable homes, is just tremendous.

And I would say to any contractor out there, do your research, get educated, and build green.

JEFF LOOMIS (builder): (Need to shoot)

The customer is getting a more durable home, a more comfortable home, a more energy efficient home, that actually will cost them less to own. It's a win-win situation.

HOMEOWNER INTERVIEW #1:

HOMEOWNER INTERVIEW #2:

HOMEOWNER INTERVIEW #3:

HOST

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Well, I've got to tell you, I'm convinced! As an ENERGY STAR® Labeled Home owner, I'll save money every year I own the home. It uses less energy, it's more comfortable, it's healthier, and the home has got to be more valuable.

ELLIS

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The home saves energy for years to come, and the stringent testing verifies that it performs properly and efficiently. That generally means that its resale value could be

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study found that the expected resale value of an ENERGY STAR® Labeled Home could be as much as \$6,000 or more, than a comparable home.

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ACTUS Lend-Lease Program at Fort Drum

Fort Drum Mountain Community Homes

Kris Carr

Fort Drum

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Community Energy Services

George and Darlene Galek

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