

Indoor airPLUS

Better Environments Inside and Out



Friday, November 18, 2011

9 a.m. – 10 a.m. EST

Michele Curreri, Environmental Protection Agency
Mert Oktem, The Cadmus Group, Inc.

- Definition
- Construction Specifications
- Why Consumers Buy Indoor airPLUS
- Value of Being an Indoor airPLUS Partner
- Steps to Building an Indoor airPLUS Home
- Available Support

What's In It For You?



For a minimal increase in your costs and home building efforts, add a nationally recognized and reputable label, so you can offer homes with features that help improve indoor air quality.

"We started looking at Indoor airPLUS and realized we were already doing most of the checklist."

- Dave Griffin, Senior Vice President of Kettler Forlines Homes

Did You Know That...

- We spend about 90% or more of our time indoors.
- Indoor pollutant levels may be 2 to 5 times higher than outdoors.
- An average of 1 out of every 10 school-aged children has asthma.
- EPA estimates that about 20,000 lung cancer deaths each year in the U.S. are radon-related.



Indoor airPLUS is a rapidly expanding program with over 700 partners who have built homes with features that reduce or prevent pollutants that can affect health.

- ‘Gold Standard’ for indoor air quality.
- Nationally recognized label.
- Best construction practices paired with up-to-date technologies.
- Quality assurance to a healthier indoor environment for consumers.
- Quality assurance using a third party verifier for builders.



Indoor airPLUS – Areas of Focus



Materials

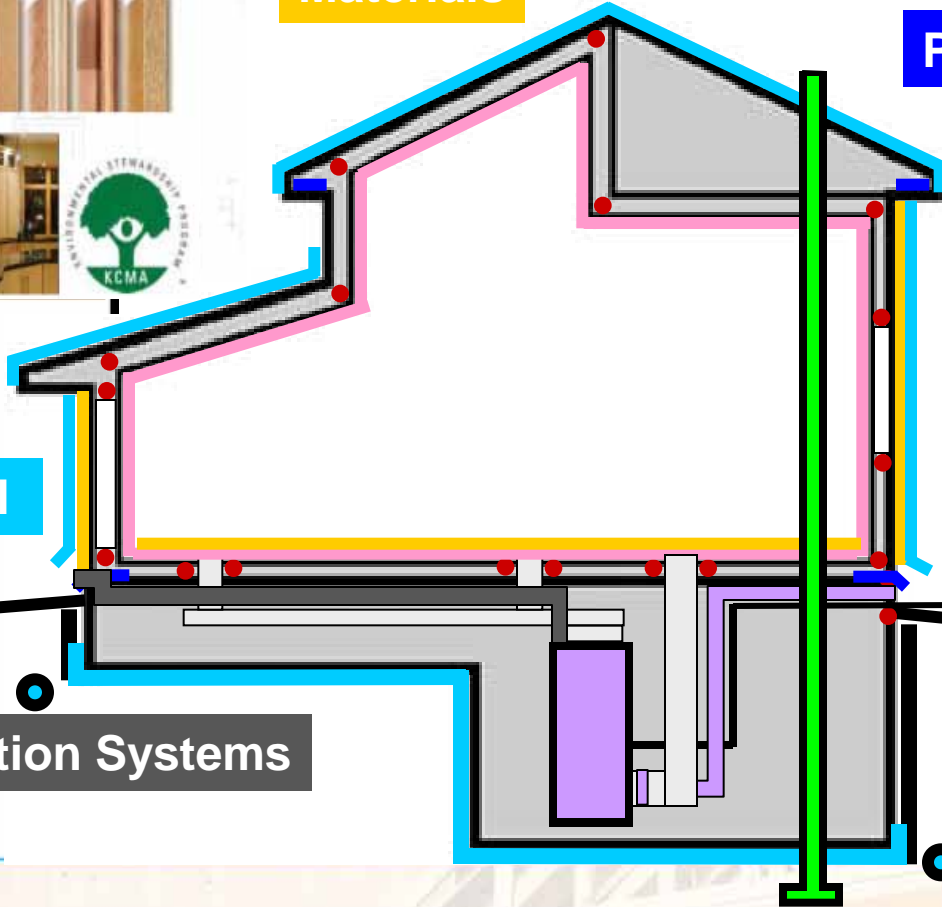
Pest Barriers

Radon Control

Moisture Control

Ventilation & Filtration

Combustion Systems



Indoor airPLUS Verification Checklist

Indoor airPLUS Verification Checklist



Address or Div/Lot #: _____ Date: _____ Verified by: _____
 City/State/Zip: _____

Section	Requirements (see Indoor airPLUS Construction Specification)	Section	Requirements (see Indoor airPLUS Construction Specifications for details)	N/A	Builder	Rater
Moisture Control	Water-Managed Site and Foundation	Moisture Control	Water-Managed Site and Foundation			
	1.1 Site & foundation drainage: sloped grade, protected drain tile, & foundation floor drains		1.1 Site & foundation drainage: sloped grade, protected drain tile, & foundation floor drains		<input type="checkbox"/>	<input type="checkbox"/>
	1.2 Capillary break below concrete slabs & in crawlspaces (Exception - see specification)		1.2 Capillary break below concrete slabs & in crawlspaces (Exception - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.3 Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)		1.3 Foundation wall damp-proofed or water-proofed (Except for homes without below-grade walls)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	1.4 Basements/crawlspaces insulated & conditioned (Exceptions - see specification)		1.4 Basements/crawlspaces insulated & conditioned (Exceptions - see specification)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Water-Managed Wall Assemblies		Water-Managed Wall Assemblies			
	1.5 Continuous drainage plane behind exterior cladding, properly flashed to foundation		1.5 Continuous drainage plane behind exterior cladding, properly flashed to foundation		<input type="checkbox"/>	<input type="checkbox"/>
	1.6 Window & door openings fully flashed		1.6 Window & door openings fully flashed		<input type="checkbox"/>	<input type="checkbox"/>
	Water-Managed Roof Assemblies		Water-Managed Roof Assemblies			
	1.7 Gutters/downspouts direct water a minimum of 5' from foundation (Except in dry climates)		1.7 Gutters/downspouts direct water a minimum of 5' from foundation (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1.8 Fully flashed roof/wall intersections (step & kick-out flashing) & roof penetrations	1.8 Fully flashed roof/wall intersections (step & kick-out flashing) & roof penetrations		<input type="checkbox"/>	<input type="checkbox"/>		
1.9 Bituminous membrane installed at valleys & penetrations (Except in dry climates)	1.9 Bituminous membrane installed at valleys & penetrations (Except in dry climates)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
1.10 Ice flashing installed at eaves (Except in Climate Zones 1 - 4)	1.10 Ice flashing installed at eaves (Except in Climate Zones 1 - 4)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Interior Water Management	Interior Water Management					
1.11 Moisture-resistant materials/protective systems installed (i.e., flooring, tub/shower backing)	1.11 Moisture-resistant materials/protective systems installed (i.e., flooring, tub/shower backing, & piping)			<input type="checkbox"/>		
1.12 No vapor barriers installed on interior side of exterior walls with high condensation potential	1.12 No vapor barriers installed on interior side of exterior walls with high condensation potential		<input type="checkbox"/>	<input type="checkbox"/>		
1.13 No wet or water-damaged materials enclosed in building assemblies	1.13 No wet or water-damaged materials enclosed in building assemblies		<input type="checkbox"/>	<input type="checkbox"/>		
Radon	2.1 Approved radon-resistant features installed (Exception - see specification)					
2.2 Two radon test kits & instructions/guidance for follow-up actions provided for buyer (Advice)						
Seals	3.1 Foundation joints & penetrations sealed, including air-tight sump covers					
3.2 Corrosion-proof rodent/bird screws installed at all openings that cannot be fully sealed (Advice)						
HVAC	4.1 HVAC room loads calculated, documented; system design documented; coils matched					
4.2 Duct systems design documented & properly installed OR duct system tested (chi)						
4.3 No air handling equipment or ductwork installed in garage; continuous air barrier required in a						
4.4 Rooms pressure balanced (using transfer grills or jump ducts) as required OR tested (chi)						
4.5 Whole house ventilation system installed to meet ASHRAE 62.2 requirements						
4.6 Local exhaust ventilation to outdoors installed for baths, kitchen, clothes dryers, central vacuum system, etc.				<input type="checkbox"/>		
4.7 Central forced-air HVAC system(s) have minimum MERV 8 filter, no filter bypass, & no ozone generators				<input type="checkbox"/>		
4.8 Additional dehumidification system(s) or central HVAC dehumidification controls installed (in warm-humid climates only)				<input type="checkbox"/>		
Combustion Pollutants	Combustion Source Controls					
5.1 Gas heat direct vented, oil heat & water heaters power vented or direct vented (Exceptions - see specifications)	5.1 Gas heat direct vented, oil heat & water heaters power vented or direct vented (Exceptions - see specifications)	<input type="checkbox"/>		<input type="checkbox"/>		
5.2 Fireplaces/heating stoves vented outdoors & meet emissions/efficiency standards/restrictions	5.2 Fireplaces/heating stoves vented outdoors & meet emissions/efficiency standards/restrictions	<input type="checkbox"/>		<input type="checkbox"/>		
5.3 Certified CO alarms installed in each sleeping zone (e.g., common hallway) according to NFPA 720	5.3 Certified CO alarms installed in each sleeping zone (e.g., common hallway) according to NFPA 720	<input type="checkbox"/>		<input type="checkbox"/>		
5.4 Smoking prohibited in common areas; outside smoking at least 25' from building openings (Multi-family homes only)	5.4 Smoking prohibited in common areas; outside smoking at least 25' from building openings (Multi-family homes only)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Attached Garage Isolation	Attached Garage Isolation					
5.5 Common wall/ceilings (house & garage) air-sealed before installation installed; house doors gasketed & closed installed	5.5 Common wall/ceilings (house & garage) air-sealed before installation installed; house doors gasketed & closed installed	<input type="checkbox"/>		<input type="checkbox"/>		
5.6 Exhaust fan (minimum 70 cfm, rated for continuous use) installed in garage & vented to outdoors (controls optional)	5.6 Exhaust fan (minimum 70 cfm, rated for continuous use) installed in garage & vented to outdoors (controls optional)	<input type="checkbox"/>		<input type="checkbox"/>		
Materials	Materials					
6.1 Certified low-formaldehyde pressed wood materials used (i.e., plywood, OSB, MDF, cabinetry)	6.1 Certified low-VOC or no-VOC interior paints & finishes used		<input type="checkbox"/>	<input type="checkbox"/>		
6.2 Certified low-VOC or no-VOC interior paints & finishes used	6.2 Carpet, adhesives, & cushion qualify for CRI Green Label Plus or Green Label testing program		<input type="checkbox"/>	<input type="checkbox"/>		
6.3 Carpet, adhesives, & cushion qualify for CRI Green Label Plus or Green Label testing program	6.3 Carpet, adhesives, & cushion qualify for CRI Green Label Plus or Green Label testing program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
Final	Final					
7.1 HVAC system & ductwork verified dry, clean, & properly installed	7.1 HVAC system & ductwork verified dry, clean, & properly installed		<input type="checkbox"/>	<input type="checkbox"/>		
7.2 Home ventilated before occupancy OR initial ventilation instructions provided for buyer	7.2 Home ventilated before occupancy OR initial ventilation instructions provided for buyer		<input type="checkbox"/>	<input type="checkbox"/>		
7.3 Completed checklist & other required documentation provided for buyer	7.3 Completed checklist & other required documentation provided for buyer		<input type="checkbox"/>	<input type="checkbox"/>		
Rater/Provider: _____	Builder: _____					
Company: _____	Company: _____					
Signature: _____	Signature: _____					

Why Consumers Buy Indoor airPLUS



- Healthy indoor environment.
- Comfort.
- Financial Sense.
- Green.



...and greater satisfaction.

"We decided to build a new house after restoring and residing in two 100-year-old homes in a row. We didn't even know the health problems attributed to those old drafty houses until we had our son. After running some low-level allergy symptoms for about a year, we moved into our new home which is Indoor airPLUS certified. The health issues cleared up immediately for all of us. It's amazing what a little clean air can do!"

-Indoor airPLUS Homeowner in Oklahoma City

Value of Being an Indoor airPLUS Partner



The market has changed – have you?

- Understand consumer needs.
- Differentiate yourself from the competition.
- Gain public recognition.
- Take a step towards green certifications (LEED, ENERGY STARv3) .
- Reduce call-backs & potential liability.
- Be a leader in your community.



Value of Being an Indoor airPLUS Partner

*“We build Indoor airPLUS homes because it is **the right thing to do.**”
George Ruzzier – Vice President of
Foxwood Builders, Inc.*

Step 1

Review Tools and Materials

EPA Step up to Indoor airPLUS

ask about

A new opportunity for leading builders to create better environments inside and out

All Indoor airPLUS qualified homes also meet strict guidelines for energy efficiency set by ENERGY STAR, the nationally recognized symbol for energy efficiency.

Step 2

Sign the Partnership Agreement

Indoor airPLUS Partnership Agreement Form

Organization Name:

Organization Type (check one):
 Home Builder
 Home Verification Organization
 Program Ally

Contact Name (required)
 First:
 Last:

Contact Phone #, E-mail and Web site:
 Phone: E-mail (required): Web site URL (required - including http://):

Street Address:
 Address 1: City: State: Zip:

Check those boxes that apply:
 Check this box if your organization participated in the original Indoor Air Package pilot.
 Check this box if your organization will be participating with Indoor airPLUS in conjunction with a green building program and enter the green building program here:

Partnership Agreements & Terms for:
[Home Builders](#) (click to expand)
[Home Energy Rating Providers](#) (click to expand)
[Other Program Allies](#) (click to expand)

As an authorized representative of the partner organization, the contact listed above has the authority to bind this organization, has read the terms of the agreement and recognizes that by clicking the box that they are binding their organization to the terms of the agreement.

epa.gov/indoorairplus

Step 3

Build, Verify and Label Homes



Join the Movement



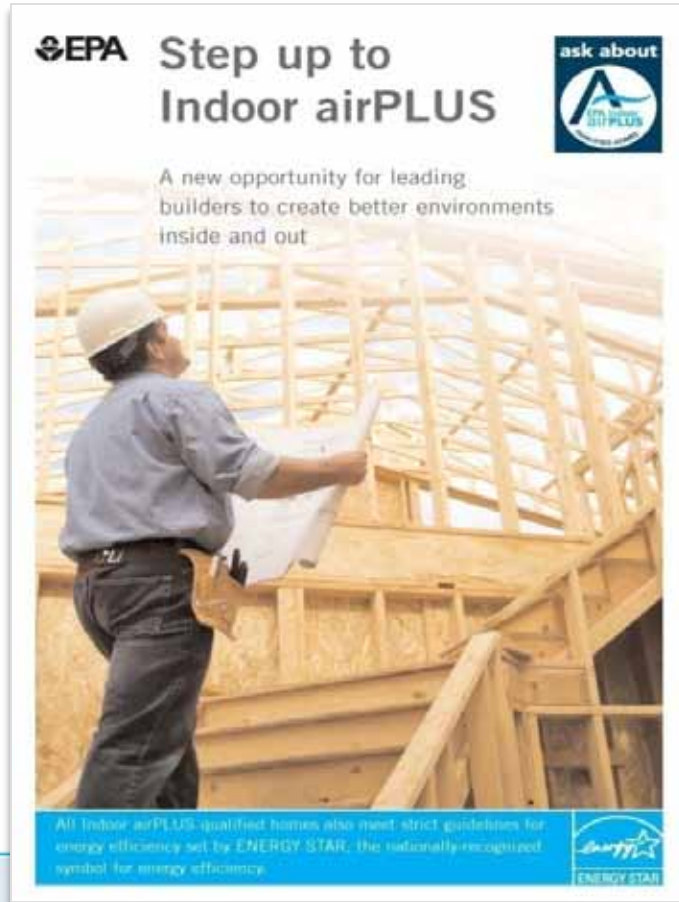
Over 700 Indoor airPLUS Homes Built to Date



Examples of Current Builder Partners

- Meritage Homes
- Ryan Homes – Locust Chapel Community
- Habitat for Humanity
- Artistic Homes
- Foxwood Builders, Inc.

Technical Support



EPA Step up to
Indoor airPLUS

ask about
A
EPA Indoor
airPLUS
QUALIFIED HOMES

A new opportunity for leading
builders to create better environments
inside and out

All Indoor airPLUS qualified homes also meet strict guidelines for
energy efficiency set by ENERGY STAR, the nationally-recognized
symbol for energy efficiency.

ENERGY STAR

This poster features a construction worker in a hard hat and safety vest, holding blueprints and looking up at the wooden framing of a house under construction. The background is a light blue sky.

Marketing Support



ask about
A
EPA Indoor
airPLUS
QUALIFIED HOMES

EPA 402/F09/001 January 2009

Indoor airPLUS
Better Environments
Inside and Out

All Indoor airPLUS qualified homes meet strict
guidelines for energy efficiency set by ENERGY STAR,
the nationally-recognized symbol for energy efficiency.

ENERGY STAR

This poster shows a smiling family—a man, a woman, and a young child—interacting in a bright, modern living room. The man is holding the child, and the woman is smiling at them. The room has light-colored walls and a white sofa.

Get the Latest Information



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EPA Indoor airPLUS App

Now in the iTunes App Store.
Download for the Android and
Blackberry at:

m.epa.gov/apps/airplus.html

Download "A Guide to Social Networking for Indoor airPLUS". Find tips to learn how to integrate these free tools into your marketing strategy to grow your business, as well as keep up with Indoor airPLUS program updates. http://www.epa.gov/indoorairplus/social_media_cards.html



Next Step – JOIN!

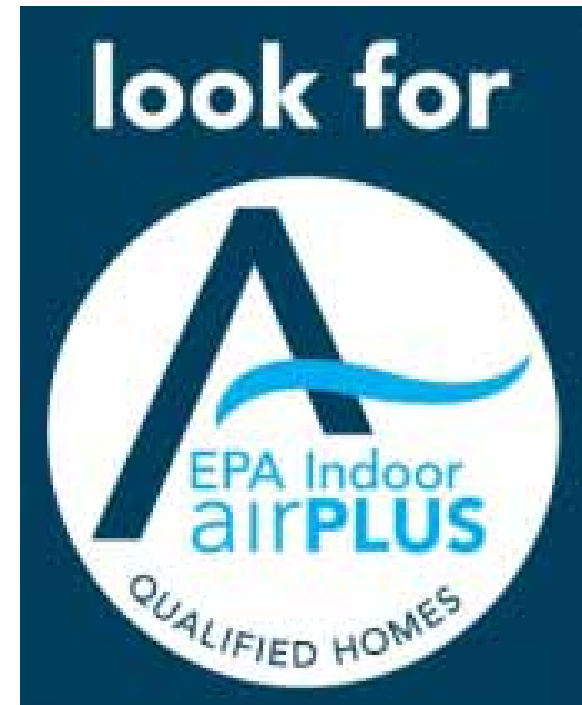


Take 5 minutes to join!

Go to:

www.epa.gov/indoorairplus

and become a **partner today.**



Thank You!



Contact us at Indoor_airPLUS@epa.gov

