

## Jenny Wright Product Manager, Green Power Switch

**February 25, 2012** 

#### What is Green Power Switch®?

It's a simple way to increase use of renewable energy today for a cleaner environment tomorrow.

- Adds more renewable energy to our local grid
- Preserves natural resources
- Protects our environment
- Offered by TVA and participating local power companies







#### How does Green Power Switch Work?

1. Customer buys "blocks" (each 150 kWh) of Green Power Switch at \$4 each Local utilities include an extra line item for this premium product on customers' monthly electricity bills.

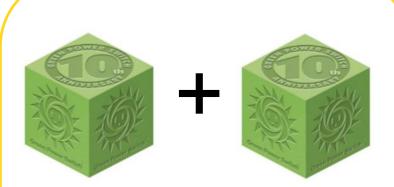
2.TVA ensures at least an equivalent amount of regional renewable energy is generated

TVA generates or purchases renewable energy above and beyond what 's already included in the regular generation mix (e.g. coal, nuclear, natural gas, and hydro).

Energy SERVICE STATES

3rd party verification process ensures that customer GPS purchases result in added renewable energy to our regional grid.

### What does a Green Power Block Equate to?



Purchasing 2 blocks of green power monthly is the equivalent of.....



or

25% Green Power

Converting the typical home to about 25% renewable power over the course of a year\*\*



<sup>\*</sup>Assumes 175 W(dc) photovoltaic panels located in Nashville. Calculated using PV Watts v.2. The calculation for 2.8 kW (16 panels X 175W) yields an annual output of 3,577 kWh, or an average of 298 kWh/month.

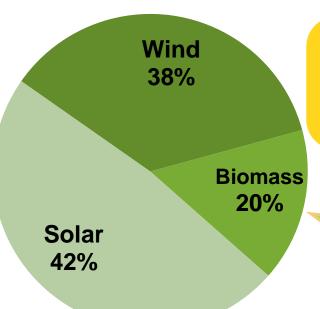
<sup>\*\*</sup> Based on average TN Valley state residential use of 1,205 kWh/ month Source: http://www.eia.gov/cneaf/electricity/esr/table5.html

## What is the Supply for GPS?

#### **Green Power Switch Capacity by Resource**

#### **Solar Capacity\***

- 16 TVA-owned sites @ 419 kW
- 832 Generation Partners installations @ 38.5 MW



#### Wind Capacity\*

- 18 turbines (Buffalo Mountain) @ 29 MW
- 25 Generation Partners installations @ 90 kW

1st GP hydro 2.8 kW!!

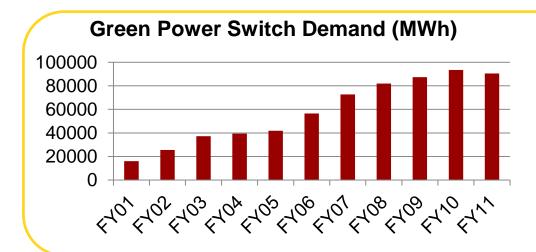
#### **Biomass Capacity\***

- City of Memphis Wastewater Treatment facility co-fired with Allen Fossil Plant (TVA site) displaces > 20,000 Tons coal per yr and generates @ 8 MW
- 5 Generation Partners installation @ 4.71 MW

<sup>\*</sup>Amounts represent a resource's generation capacity. Actual generation can vary.

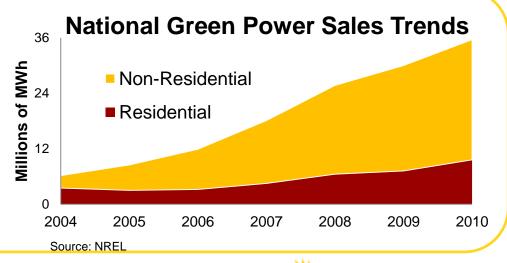


### Are Others Buying Green Power?



- Approximately 11,600 GPS customers today
- Non-residential make up nearly half of total sales

 Non-residential sales are driving green power growth both nationally and within TVA territory.



## Why do Customers Sign Up?

- Provides a simple low cost way for people to do their part for a bigger issue
- Preserves natural resources for future generations
- Encourages renewable energy use
- Meets corporate environmental goals
- Reduces their environmental footprint
- Provides positive PR
- Provides energy independence
- Benefits of customer recognition program
- Sign-up for Green Power Switch by:
   Visiting <u>greenpowerswitch.com</u>

Calling 1-866-673-4340

Calling local power company



## How Does the Recognition Program Work?

**Three** Supporter Champion **Visionary** Levels of Recognition **Minimum** 100 blocks 500 blocks 2,500 blocks **Purchase** (Monthly) (Monthly) (Monthly) **Amounts** Low \$4,800 \$10,000 \$2,000 **Minimum** (Monthly) (Monthly) (Monthly) Costs Group Recognition Individual **Benefits** Recognition

- 1. Additional special recognition from TVA and your local power distributor may be available for significant purchases well beyond the 'Visionary' threshold including special recognition for customers offsetting 100%
- 2. Threshold levels for recognition categories may be reset annually.

## National Green Power Recognition

In addition to the regional recognition that TVA provides, many national programs exist:

- EPA -Green Power Partnership and purchaser awards (multiple categories)
- 2. LEED accreditation
- 3. Greenhouse gas accounting tools such as: WRI and WBCSD's Greenhouse Gas Protocol, and ICLEI's Local Government Operations Protocol







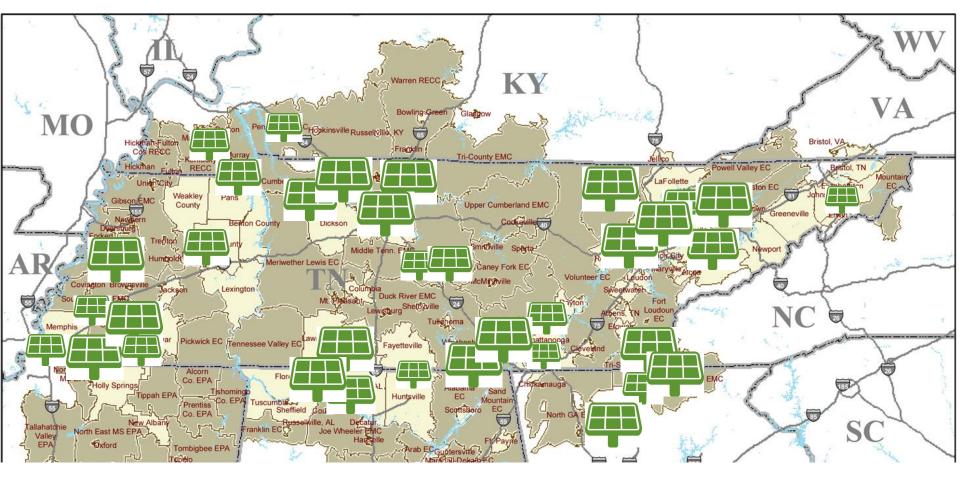


## Case Study

GPS Customers enroll for many reasons. The following video is a collection of stories from real GPS customers:



#### Green Power Switch Drives Investment



December 2009 – 157 solar installations

December 2012 - 832 solar installations!

## Generation Partners -> Green Power Providers

- + Maximum 50 kilowatts
- + Solar, wind, hydro, biomass
- + 20 year contract (10 years at premium rate, 10 years at retail rate)
- + \$1,000 incentive
- + Initial \$.12 / \$.03 premium will be evaluated annually
- + Participation will be limited to match GPS revenue

TVA's goal for Green Power Providers and Green Power Switch is to provide long-term stability and sustainability to small-scale renewable growth in the region.

#### Renewable Standard Offer

2 solar installations at 1.2 MW capacity, and an additional 28.2 – 35.6 MW of biomass in the pipeline

#### Projects must:

- Be located in the Tennessee Valley region
- Be greater than 50 kW and less than or equal to 20 megawatts
- Be focused on solar, wind, biomass gasification, and mature renewable technologies such as biomass direct combustion, methane recovery, and co-firing of 50% or more biomass
- Establish interconnection with a power distributor's or TVA's electric system
- Have gone online no earlier than Oct. 1, 2010.

RSO is not part of the GPS supply portfolio, but it will be considered for future GPS options.



Available

<sup>\*\*</sup>www.tva.com/renewablestandardoffer

#### RSO + Solar Solutions Initiative

#### Available now (February 2012 launch)

- Solar Solutions Initiative 2 year pilot
  - Economic development incentive overlay for Renewable Standard
     Offer solar projects in the Valley that use equipment manufactured
     and installed by companies in the Valley
  - Projects must be between 50 and 1,000 kilowatts
  - Limited to 10 megawatts per year



## Green Power Switch

**Questions?** 

## What Does the Recognition Program Offer?

Recognition	Supporter	Champion	Visionary <sup>1</sup>
Web listing by size of purchase or category	Web link	Company profile & Links	
Window cling(s)	X	Χ	X
GPS Mark for customer website or materials	X	X	X
Certificate	X	Χ	X
Plaque		For Retail Businesses	
Press release		Χ	X
Ready-to-Print GPS poster w/ company name		X	X
Banner for special events			X
Group Thank you Ads (paper)		X	X
Custom Thank you ad (paper) or Facebook			X
Green Power Switch Leadership Awards		X	X
Minimum Monthly Amount (Blocks) <sup>2</sup>	100	500	2500
Minimum Monthly Purchase Price	Varies	\$2,000	\$10,000

- 1. Additional special recognition from TVA and your local power distributor may be available for significant purchases well beyond the 'Visionary' threshold.
- 2. Threshold levels for recognition categories may be reset annually.

# What Are Minimum Purchase Amounts by Customer Size?

#### **Commercial Minimums (based on usage)**

Rate Class	Minimum Monthly Purchase	Minimum Monthly Cost
GSA -1	5 Blocks	\$20
GSA- 2	25 Blocks or 5 % load (whichever is highest)	\$100
GSA-3	250 blocks	\$1,000
GSB, GSC, GSD	375 blocks	\$1,500