



Colorado Springs Utilities

It's how we're all connected



Colorado Springs Utilities Smart Grid Initiative

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Smart Grid for Colorado Springs Utilities – What is it?





Smart Grid Drivers

- Deliver customer value
- Meet evolving energy & water requirements
- Improve operational efficiencies



Consumer Focused Smart Grid Characteristics



Photo Illustrations: energytechstocks.com and treehugger.com



The Smart Home

Added green power sources

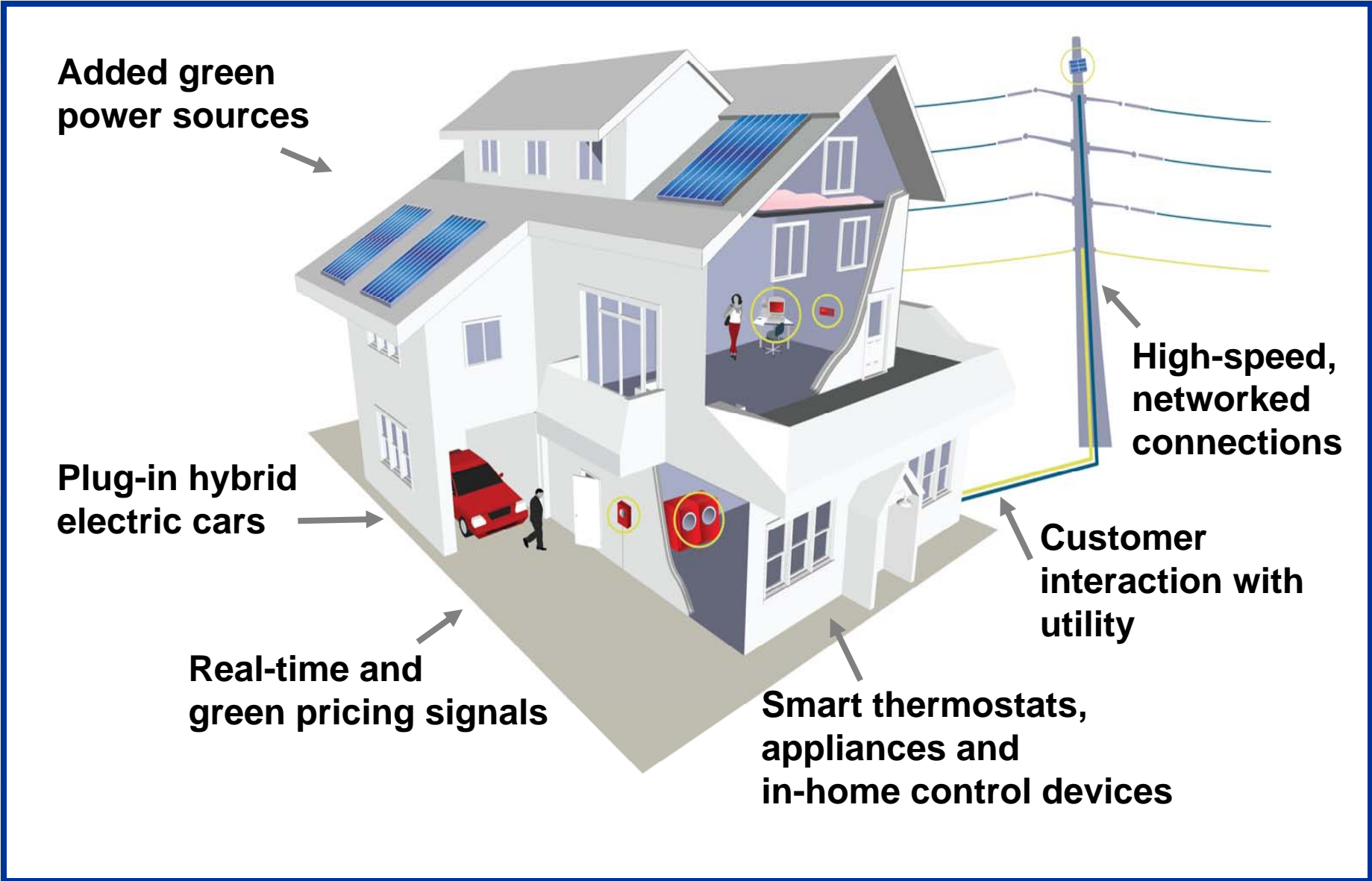
Plug-in hybrid electric cars

Real-time and green pricing signals

Smart thermostats, appliances and in-home control devices

High-speed, networked connections

Customer interaction with utility





Developing a Smart Grid Roadmap

- Consumer Products
 - Displays / information
 - Controls
- Systems
 - Communications
 - Applications
- Operations
 - Data
 - Monitoring
 - Managing

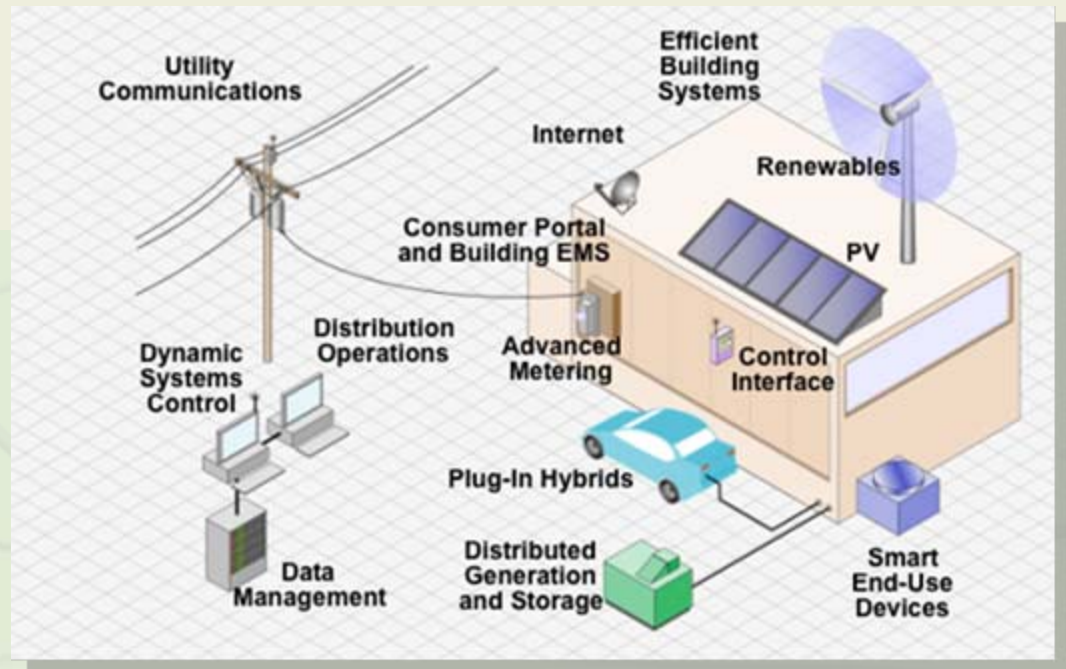
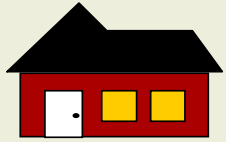


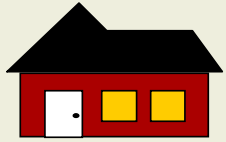
Illustration: wordpress.com



Our AMI Technology



Residential



Residential



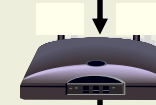
Commercial



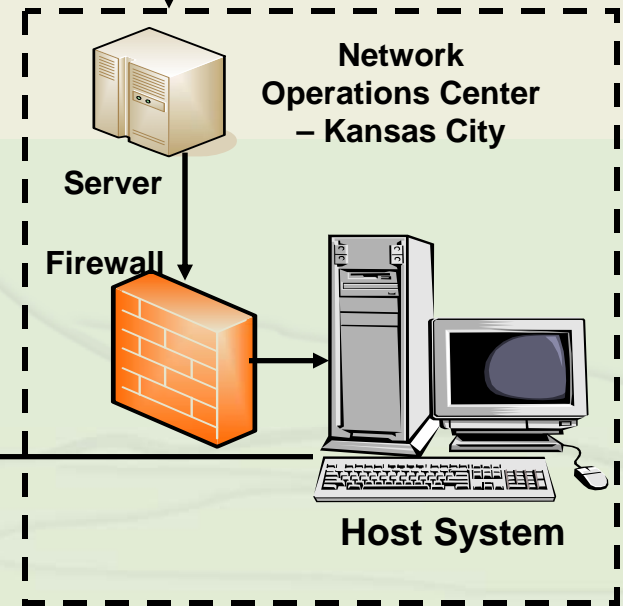
Concentrator
902 – 928 Mhz



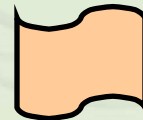
Take Out Point



Router (SECC)



Colorado Springs Utilities



Customer Information System

Transmit intervals @ 917.58 Mhz

Electric - Every 5 minutes

Gas - Every 15 minutes

Water - Every 15 minutes



Smart Grid Initiatives

- Implement Meter Data Management System
- Distribution Automation / Remote system monitoring
- Customer Portal
- Expand Load Cycling program / Demand Response
- Integrate AMI with Outage Management System
- Revise our residential electric Time of Use program
- Monitoring in-home usage - \$'s, H₂O, CO₂



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