

# WPUI

Smart Grid and Smart Appliances

# Sub-Zero Group, Inc.

- 3<sup>rd</sup> generation, family owned since 1945
- 100% US Manufacturing
  - Madison, Fitchburg, Goodyear AZ
- Leading luxury appliance brands

# Framing Questions

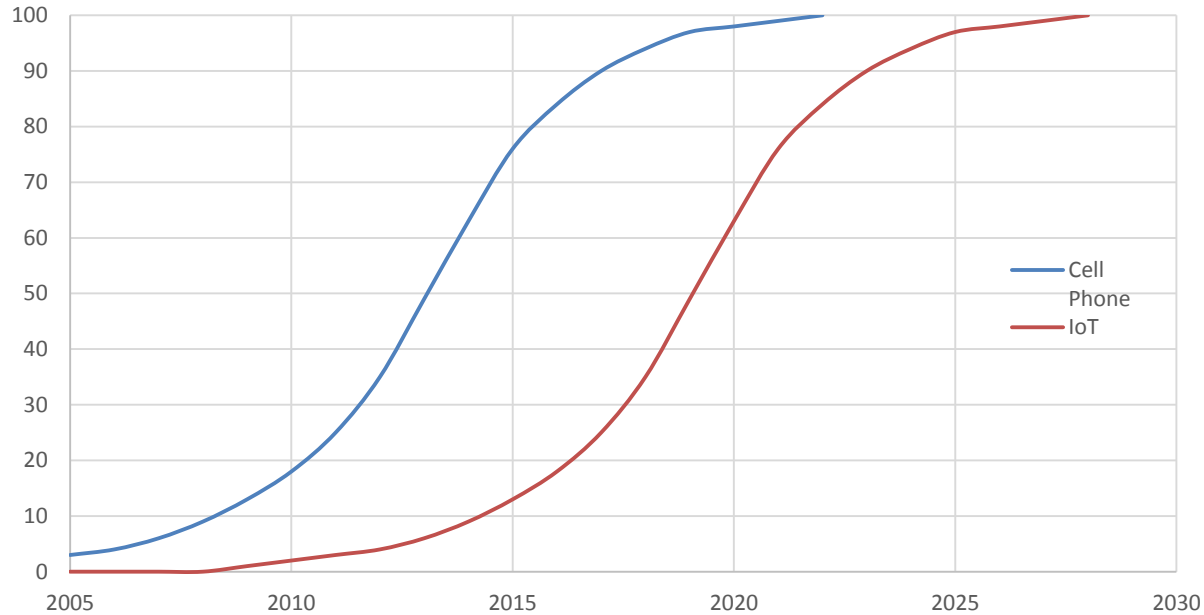
- Is Energy Star Working?
- What do customers want in the future?
- Will people really control appliances from their smart phone?
- What is needed for future appliances?
- How much will people invest in managing energy consumption?

# Energy Star

- Appliance Industry Negotiated 5% credit toward standard
- Adoption appears very low
  - Largely driven off lack of test procedures
  - Significant headwinds with open standards
- Energy Star at growing odds with consumer demands
  - Performance
  - Cost versus gains

# Demand is coming

Customers will ask once good products exist... ..demand will rise rapidly



In general, customers we interviewed demonstrated high interest in a connected appliance

70%

would prefer a connected  
appliance

Want to upgrade their existing  
appliances

# What do customers want

- Value – not gimmicks
- Ease of Use and peace of mind
- Things that actually work!!!
- Make an appliance better, not something it hasn't been

# Why Hasn't anyone succeeded

- Apple is struggling with control, others don't have enough
- Cost to benefit hasn't tipped
- Protocol adoption
  - Smart meters went Zigbee – homeowners didn't



# Now What

- Bluetooth, Wi-Fi, Meshes and the Cloud
- Lessons from Nest
  - Don't even set it, and still forget it
- Lessons from Echo
  - Fast changes
  - Ease of Use is a big gain

# Other trends

- Walled Gardens are Falling
- Cellular is making a second play
- Costs are converging
- Convenience is key
- Security is Serious...ly lacking

# Q&A

- What do you want to hear from Appliance Manufacturers?
- What does your consumer research show?
- What lessons have been most important to you?
- Where do you see regulation versus market forces?
- How are you tracking and planning against technology growth?

# Thank you!

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