

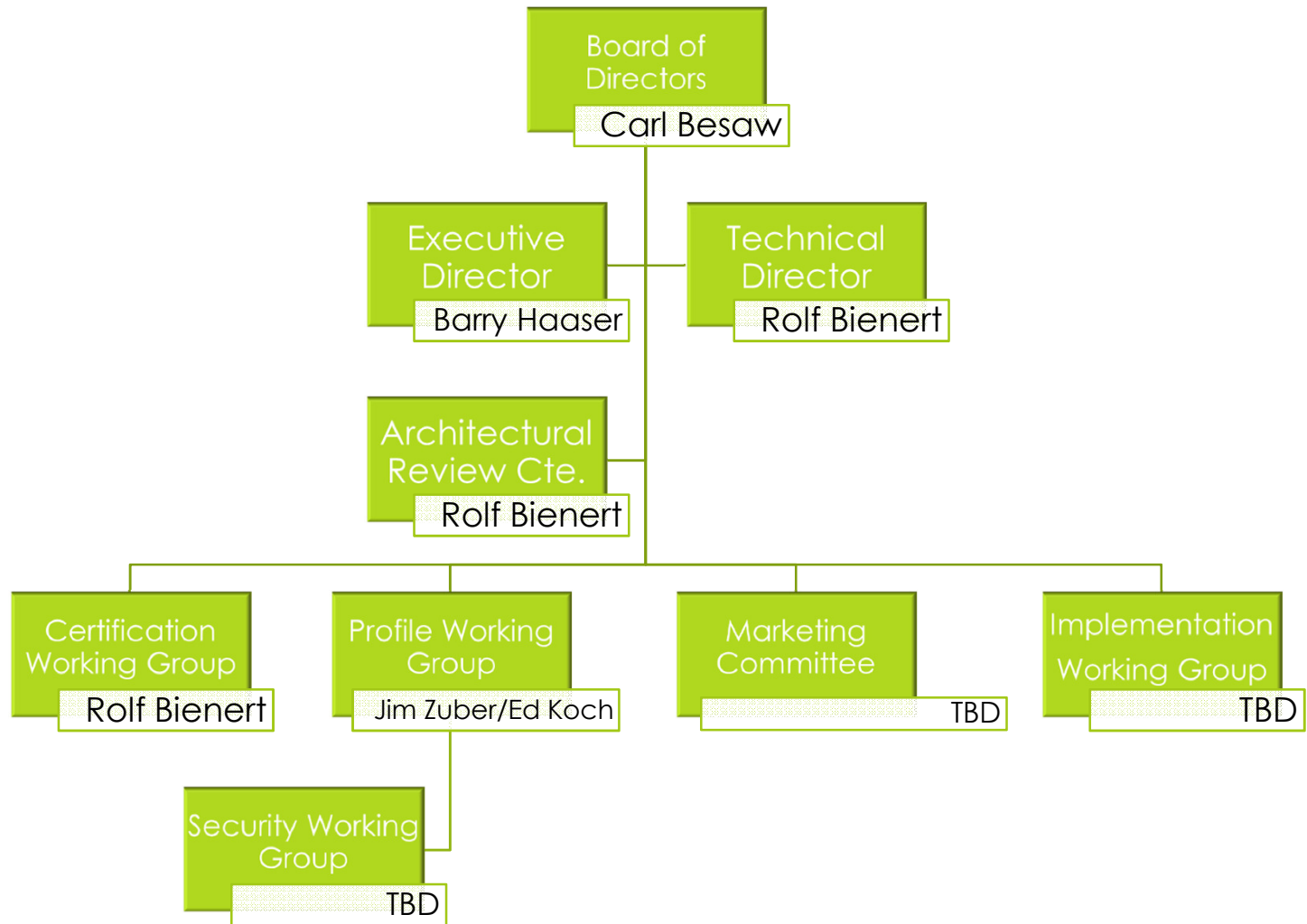


# OpenADR Technical WGs

Member Meeting and Open House, May 2015

Rolf Bienert

# Organizational Structure



# Architectural Review Committee

- Not open to all members
- Technical champions of board member level companies
- Reviews specific decisions that cannot be resolved by consensus of the working groups

# Profile Working Group

- Open to All Members
- Reviews all issues concerning the profile specification, PICS, and test plan
- Creates new specifications and updates
- Tracks issues with specification
- Meets **Thursday's at 3PM** US Pacific time, shared time slot with Implementation Committee
- Good place to ask questions about schema and conformance statements

# Implementation Working Group

- Open to all members
- Newly formed working group
- Shares 3PM US Pacific time slot on Thursdays
- Is tasked to create the Implementation Guidelines:
  - Implementation Architectures
  - Define roles of VTNs and VENs in deployments
  - Defines use cases for DR programs
  - Maps OpenADR 2.0 to DR programs

# Security Working Group

- Open to All Members
- Reviews all issues concerning the profile specification security aspects
- Meets when needed at 9am US Pacific time on Wednesdays

# Certification Working Group

- Open to all members
- Currently merged with Profile Working Group → no activity within this group

# Tools for members

1. Website & Login
  - ▣ Member content wanted
2. Retrieving your password
3. Your Profile
4. E-Lists and Committees
5. Document storage
6. Community and Forums
7. Help desk



# Website

The screenshot shows the OpenADR Alliance website homepage. At the top left is the logo, which consists of a stylized '@' symbol followed by the text 'openADR ALLIANCE'. To the right of the logo are two buttons: 'Member Login' with a lock icon and a search bar labeled 'Search our Site...' with a magnifying glass icon. Below the logo and search bar is a horizontal navigation menu with the following items: Home, About Us, Resources, Products, Join, News & Events, FAQ, and Contact Us. The main content area features a large image of two utility workers in hard hats and safety vests looking at a blueprint on a construction site at night. To the right of this image is a text box with the heading 'UTILITIES:' and the text: 'Products and systems built on the OpenADR open standard help utilities maintain grid reliability and their customers (and consumers) to realize significant value'. Below the image and text box is a section titled 'Control Your Energy Future' with a paragraph of text explaining Demand Response (DR) programs and a link to 'Join us'. To the right of this section is a 'Quick Links' box with five buttons: 'Browse Products', 'Upcoming Member Meeting', 'Free Webinar Series', 'Specification Download', and 'Build a Product'. Below the 'Control Your Energy Future' section is a 'Click Here For Upcoming Webinars' link and a calendar widget showing events for May 13, 26, and 27. To the right of the calendar is an 'About the OpenADR Alliance' section with a paragraph of text. Below this is a 'Latest News' section with a list of news items, including 'Alliance To Host Member Meeting at SCE', 'Call for Review: OpenADR Alliance Releases Draft of OpenADR 2.0 Program Guide', and 'OpenADR Alliance 20+ Members to Showcase Smart Grid Solutions'. The footer of the page features the OpenADR Alliance logo on the right side.

**openADR ALLIANCE**

Member Login Search our Site...

Home About Us Resources Products Join News & Events FAQ Contact Us

**UTILITIES:**  
Products and systems built on the OpenADR open standard help utilities maintain grid reliability and their customers (and consumers) to realize significant value

**Control Your Energy Future**

Demand Response (DR) programs help utilities maintain grid reliability and enable customers to realize significant value. Unfortunately, existing proprietary solutions add unnecessary cost and complexity. The OpenADR Alliance was created to standardize, automate and simplify DR to enable utilities to cost-effectively meet growing energy demand, and customers to control their energy future. Together we are creating the future of demand response today. [Join us.](#)

[Click Here For Upcoming Webinars](#)

**About the OpenADR Alliance**

The OpenADR Alliance (now with over 130 member companies) was formed 2010 by industry stakeholders to build on the foundation of technical activities to support the development, testing, and deployment of commercial OpenADR and facilitates its acceleration and widespread adoption.

**Quick Links**

- Browse Products
- Upcoming Member Meeting
- Free Webinar Series
- Specification Download
- Build a Product
- All Press Releases

**Latest News**

- Alliance To Host Member Meeting at SCE
- Call for Review: OpenADR Alliance Releases Draft of OpenADR 2.0 Program Guide
- OpenADR Alliance 20+ Members to Showcase Smart Grid Solutions
- OPENADR ALLIANCE INVITE ©

# Document Review

- OpenADR 2.0a/b Profile Specification
- OpenADR 2.0a/b PICS
- OpenADR 2.0a/b Test Plan
- Schema
- Implementation guide (VEN – 2.0a)
- Certification documentation
- Certification Process

# Document Review

- OpenADR 2.0a/b Profile Specification
  - General information
  - Profile description
  - Transport Protocol\*
  - Security\*
  - Conformance statements\*

\* Review carefully

# Document Review

- OpenADR 2.0a/b PICS – Protocol Implementation Conformance Statement
  - Understand the requirements
  - Mandatory vs. Optional test cases
  - Helps determining the testing requirements
  - Optional payload elements vs. Optional features

# Document Review

- OpenADR 2.0a/b Test Plan
  - Test cases for VEN, VTN, Pull, Push, etc.
- Schema
  - Mandatory schema that validate with EI
  - Sample payloads

# Document Review

- Implementation guide (VEN)
  - Step-by-step implementation help
  - Work in progress
  - Looking to create additional guides for VTN, etc.
  
- New reference document in progress

# Document Review

- Certification documentation
  - Review 'Certification Requirements for OpenADR 2.0a/b'
  - Declaration of Conformity (signed by manufacturer and test house)
  - Signed PICS document
  - Passing test report from test service provider
  
- Image or logo for product
- Web link to product or company
- 50 words product description

# 2014/15 OpenADR Work Items



VTN (Utility,  
Aggregator, DR  
Operator)

Currently OpenADR 2.0 defines the communications interface

- No specific DR Program Definitions & Restrictions
- Very flexible
- **Many Implementers (VTN & VEN) seek more Guidance and Harmonization**



VEN  
(C&I, SMB,  
Residential)

Implementation Working Group started work to expand the domain of the protocol

- Define common DR program goals and objectives
- Reduce the complexity by defining common OpenADR-based DR programs
- Create a decision tree for implementers to select the relevant program to support
- Create testable DR program templates



# OpenADR DR Parameters

## ■ Grid Reliability & Safety (Primary Objective)

- Frequency and Voltage Stability
- Resource Adequacy
- Peak Capacity
- Ramping
- Contingency
  - Peak Shaving
  - Load Following
  - Frequency Regulation
  - Reserves
  - Asset Protection
    - Transactive (Incentivize)
    - System Load Requests
    - Indirect Automation
    - Control Physical Devices
      - Different Customer segments (C&I, ...)

Example of  
Decision Tree

Secondary Objectives

Load Profile Objectives

Interaction Pattern

# OpenADR DR Parameters

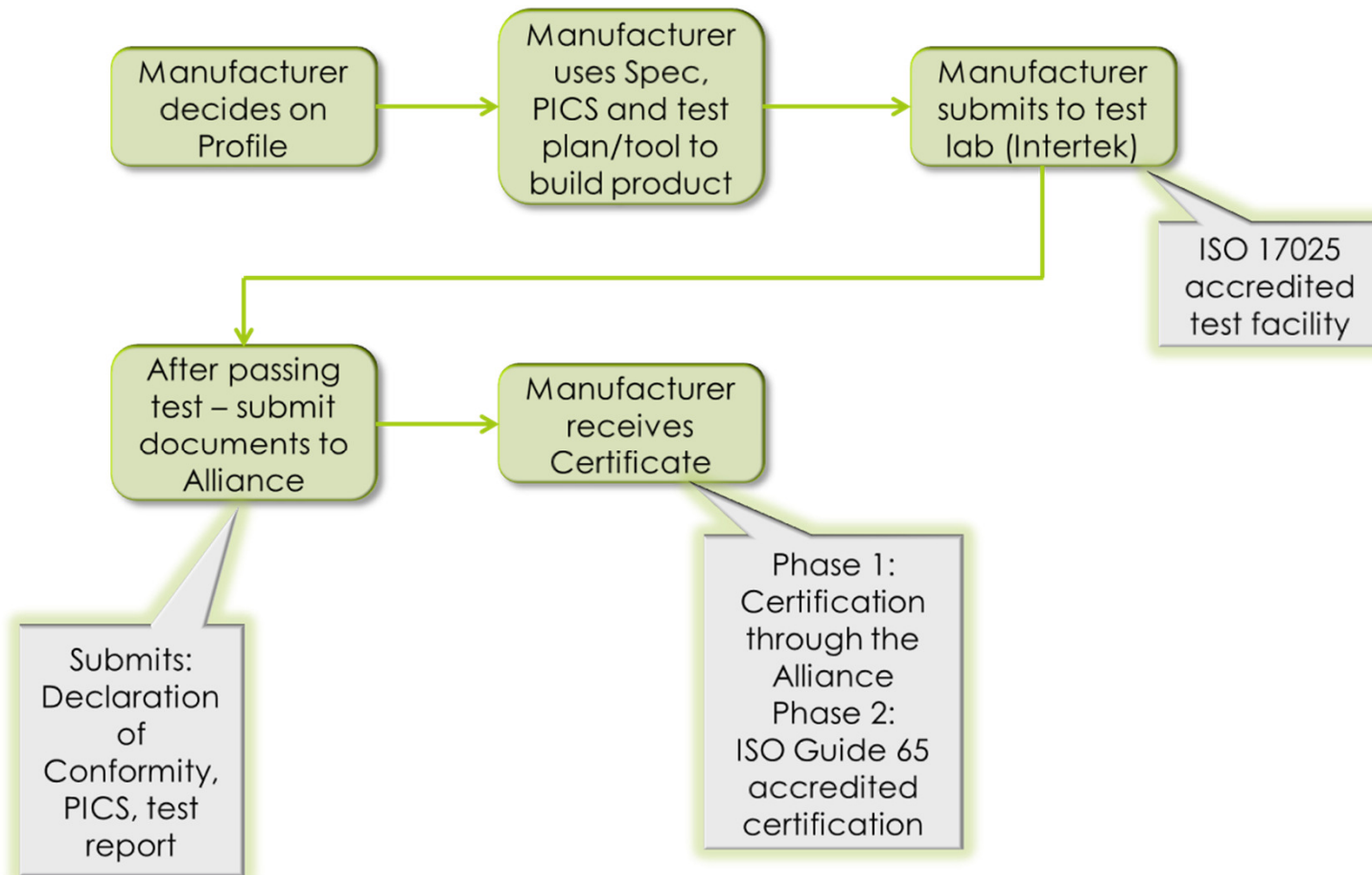
- Additional Primary & Secondary Objectives
  - Procurement of Energy
    - Spot Market Prices
    - Price Arbitrage
  - Asset Management
    - Damage Prevention
    - Maintenance Reduction
    - Lifetime Extension
  - Capacity Management
    - Economic Benefits
    - Emergency Management
  - Environmental
    - Negawatt
    - Clean Energy

# DR Program Guide Outline

- The new OpenADR Program Guide will include the following sections
  - Definition of Actors
  - Processes
  - Program Attributes
  - Program Templates
  - Deployment Scenarios
  - RFI Templates

# Certification Process

## ■ Certification Process



Thank You!

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