



Capitalize • Optimize • Market Wise

The New
USGBC LEED
Demand Response Credit

Presented By
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We are a Different Kind of Consulting Company

Our Services

Market Assessment	Strategy Development
Implementation	Managed Services

Skipping Stone is a different kind of energy consulting company. We are energy industry veterans who have chosen to consult, rather than generalist consultants who happen to be on an energy assignment.

For clients, the distinction is significant. We understand their businesses, are involved in the energy marketplace every day and have walked many miles in their shoes. As a result, we measure every engagement based on client success metrics. Our own success comes from repeat clients and referrals, which is 80% of our business.

Market Focus



Power Markets



Demand Response



Natural Gas Markets



Renewable Energy



Energy Technology



Energy Management

Over 230 Clients Worldwide



The Goal of rolling out the LEED DR credit is the widespread adoption of DR by the building community and the adaptation to buildings needs by enabling technologies, utility/ISO programs and service providers as well as the professionals from all the above.

LEED DR CREDIT DEVELOPMENT TEAM





LEED

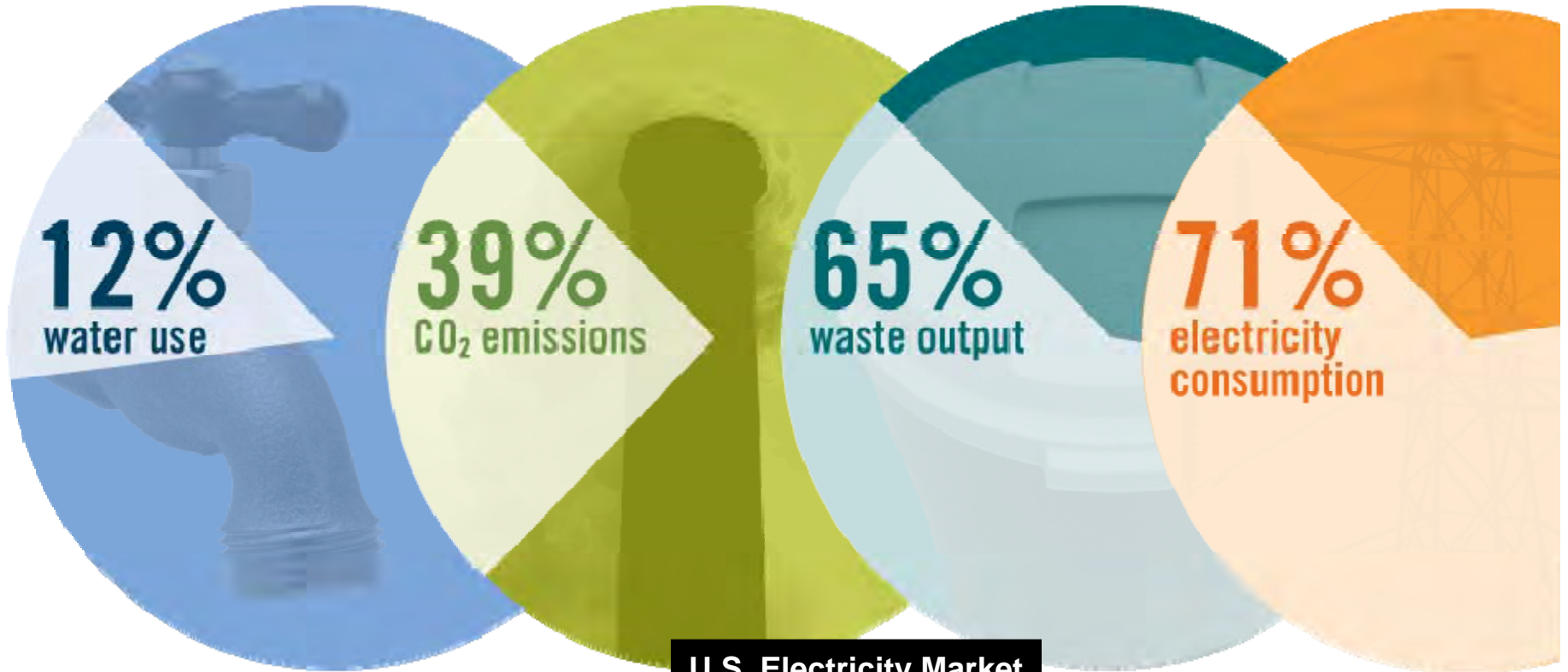
A leading-edge system
for certifying the
greenest performing
buildings in the world



**The
Average
Green
Building
Saves:**



U.S. Building Impacts:



U.S. Electricity Market

Residential	155.4 Billion	125 Million
Commercial	135.5 Billion	17.6 Million
Industrial	68.9 Billion	775 Thousand

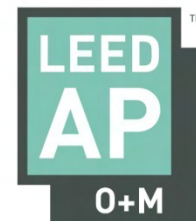


LEED Credit Categories



175,000 building professionals
across all areas of practice have become
LEED credentialed professionals.

GREEN BUILDING[®]
CERTIFICATION INSTITUTE



The USGBC LEED DR Credit Will Significantly Impact the Building Community



Meter Data Optimization Technology Building Automation Systems Continuous Commissioning

Equipment Load Control Energy Management Software

Communications Facility Mgmt. Professional Training

Tenant / Employee Behavior Measurement & Verification Property Management USGBC

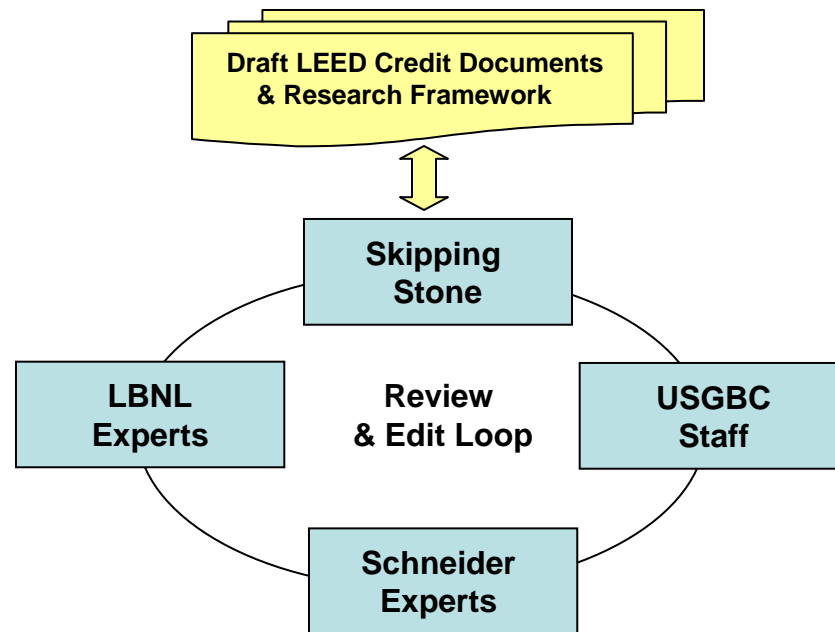
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LEED DR Credit Development

Buildings & Energy & Demand Response Expertise

LEED DR CREDIT COLLABORATION PROCESS			
USGBC	LBNL	Schneider Electric	Skipping Stone
Building Community	Extensive Research	Building Expertise	Project Management
LEED Framework	DR Market Data	LEED Implementations	Energy Markets Expertise
Pilot Credit	DR Expertise	DR Experience	Document Drafting



USGBC LEED Credit 12 Essential Elements

Background
1. Benefits//Issues
2. Related Credits
3. Referenced Standard

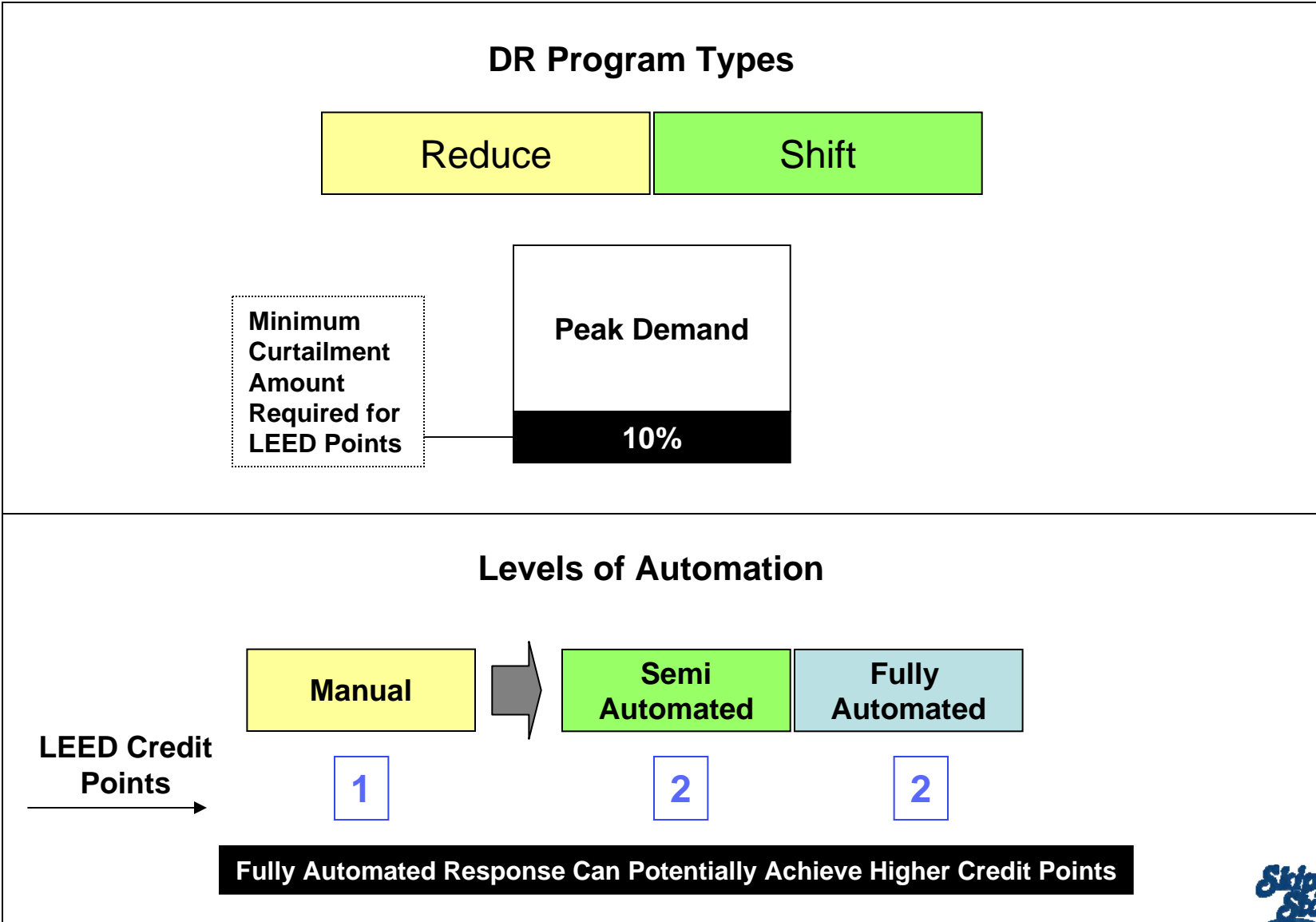
Implementation Plan
4. Implementation
5. Timeline and Team
6. Calculations
7. Documentation Guidance

Reference Material
8. Examples
9. Resources
10. Definitions

The 12 Elements result in a set of guidelines for buildings and those assisting them to implement DR and achieve LEED credits for doing so.

Regional Context
11. Exemplary Performance
12. Regional Variations

LEED DR Credits Breaks Down into Types and Levels of Automation



LEED DR Implementation Approach Will Impact Points Awarded

Levels of Automation

Manual

Manual Demand Response

A human is required to act at each step in a DR event

Semi
Automated

Semi-Automated DR-

An automated system receives the DR event notification. A human then initiates DR actions through an automated system to initiate pre-programmed sequences. Similar system requirements as fully automated.

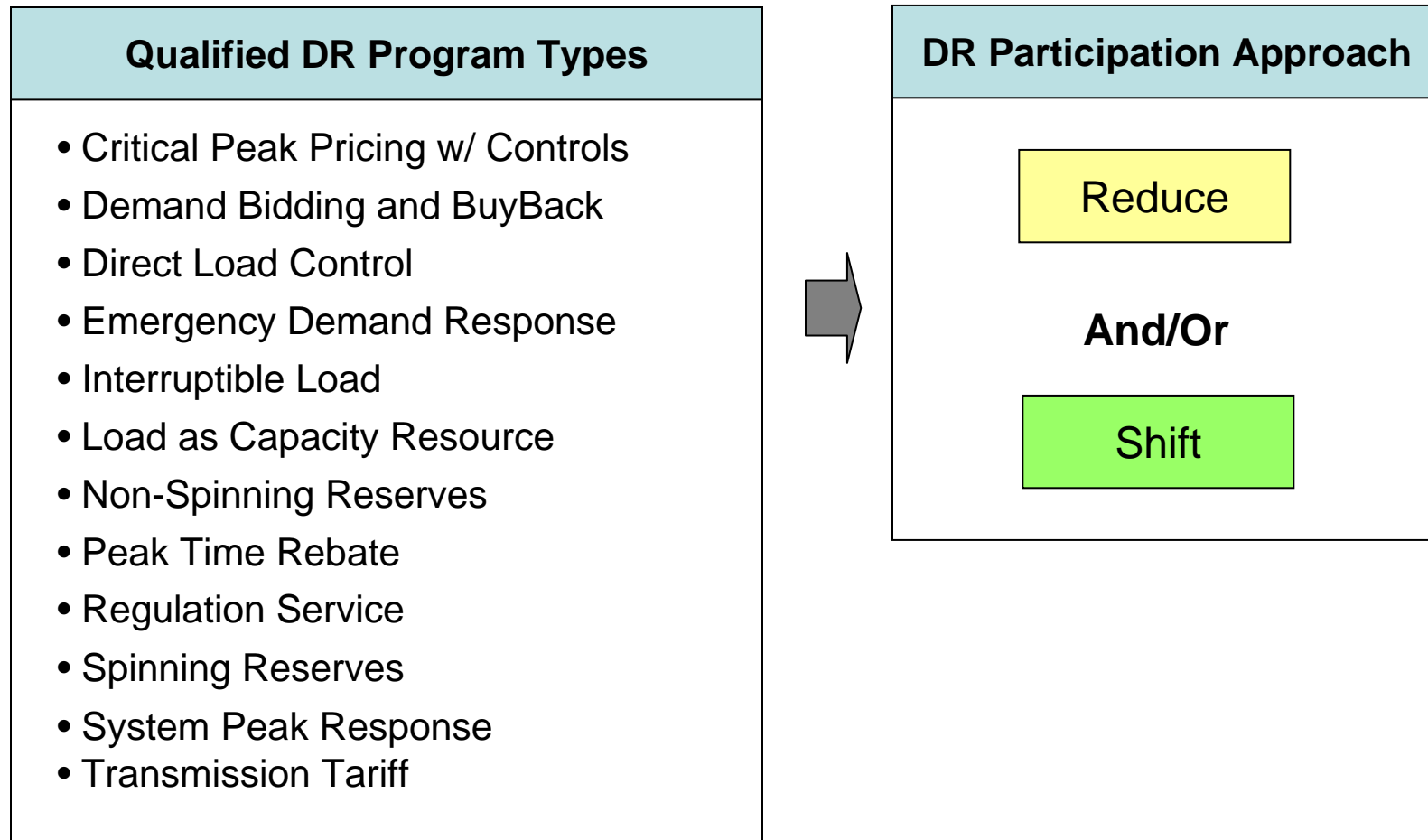
Fully
Automated

Fully Automated Demand Response

A human *is not* included in the DR event process

1. The onsite automated system polls for or receives DR event signals directly from the “grid”.
2. The automated system initiates the pre-programmed sequences
3. The automated system returns the building to normal operation

LEED DR Credit Requires Buildings to Select a Qualified DR Program and Participation Approach



**To Assist Buildings & Others to Find
A LEED Qualified DR Program We Built The....**



The Guide to Demand Response Programs

www.NationalDRDirectory.com

**A Searchable Database with
Summary Reports with links to All Qualified U.S. DR Programs**

- By program provider name
- By program provider type (utility, ISO, Muni, etc)
- By program type (demand, load control, etc)
- By state
- By customer type (commercial, residential, etc)
- FERC & NERC Cataloged

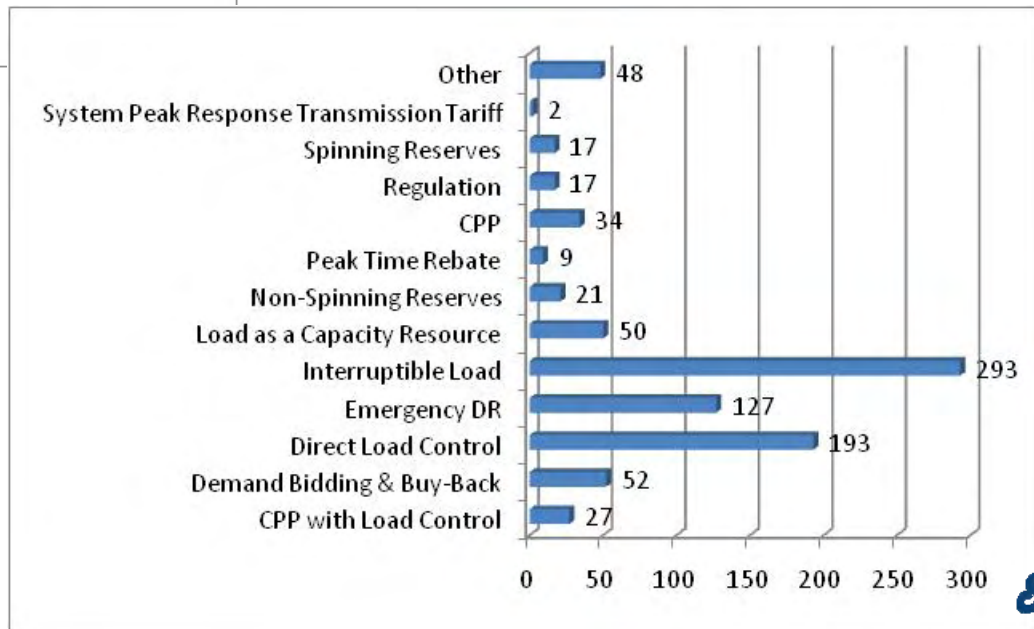
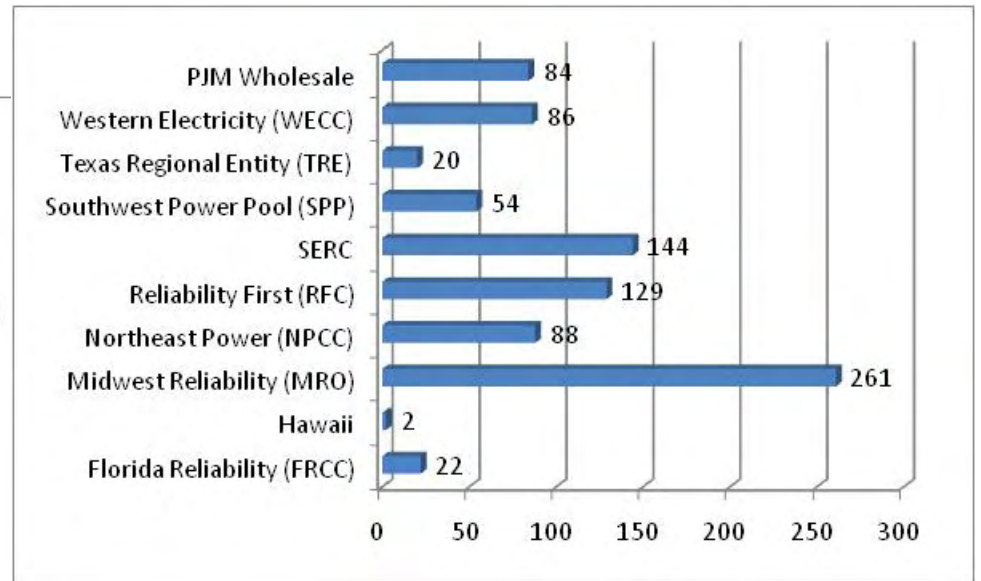
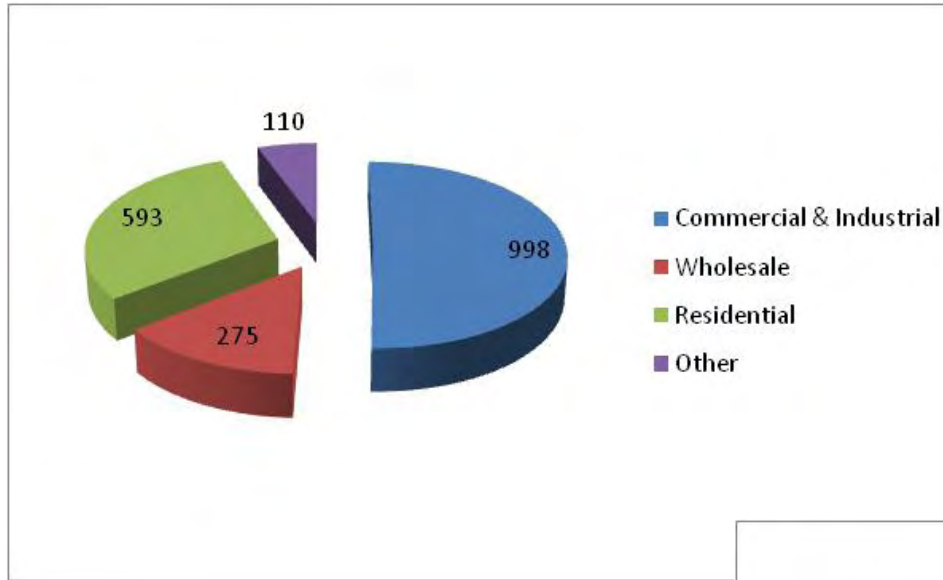
Custom Reports & Services Available

- DR program detailed analysis
- DR program selection and viability assessment
- DR program design
- LEED DR application preparation
- DR training & education programs



Demand Response National Directory

856 LEED Qualified DR Programs



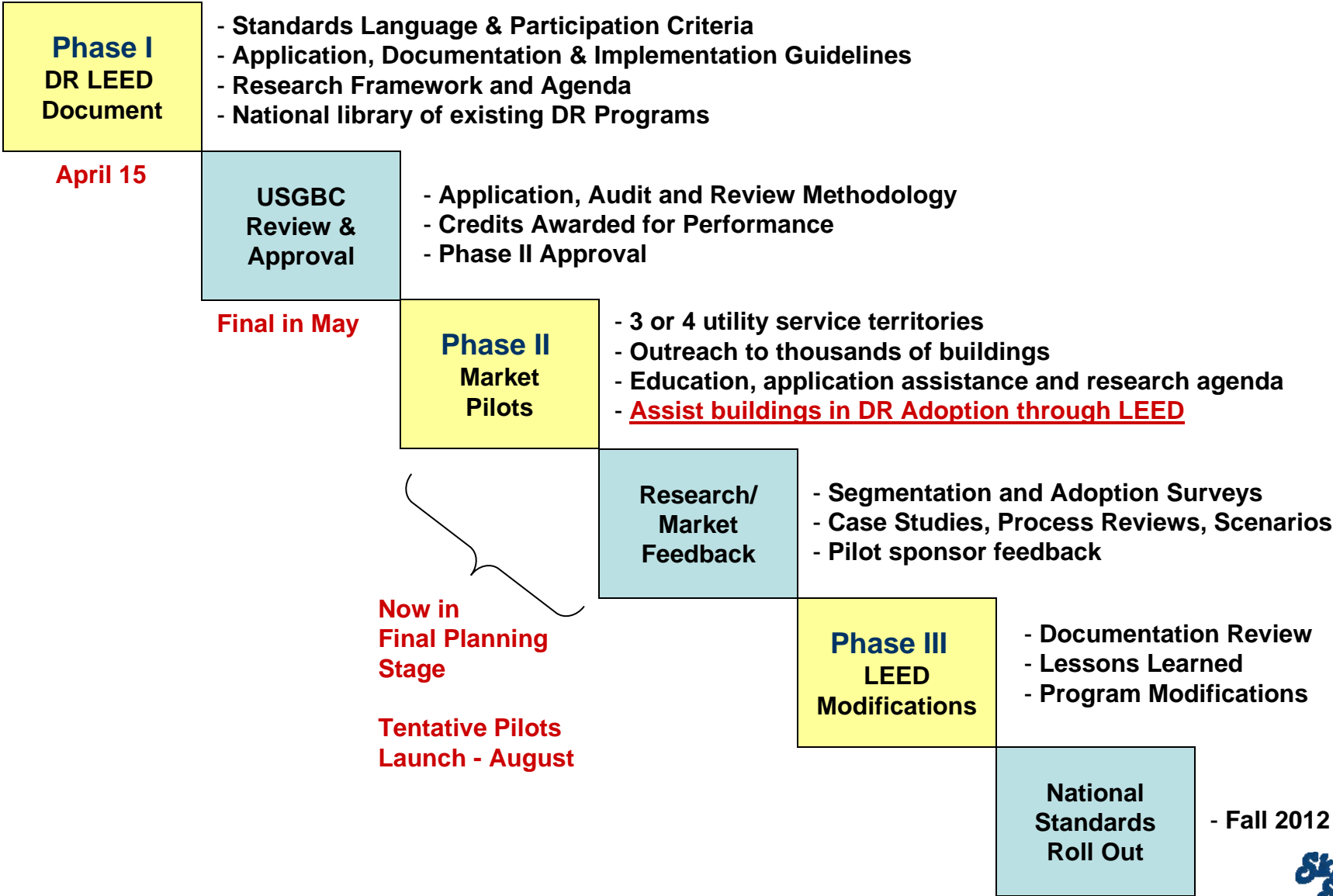
National DR Directory

The Guide to Demand Response Programs

www.NationalDRDirectory.com



USGBC LEED Credit: Demand Response A Phased Roll Out Approach



Market Pilot Methodology

Central Team

Regional Teams

Pilot Set Up

- LEED Credits Criteria
- Documentation Required
- USGBC Coordination
- Tracking & Reporting
- Research Defined
- Customer Outreach Plan
- Utility Coordination
- Resource Readiness
- Project Plan
- Retain Resources
- Train Resources
- Infrastructure Set Up
- Program Management

Utility Participation Agreement

Implementation Prep

- Customer Lists
- Customer Forms
- Outreach Scheduling
- Research Tools
- USGBC Chapter Plans
- Roll Out Scheduling
- Training Materials

Customer Outreach & Education

- Customer Meetings
- USGBC Mailings
- Chapter Meetings
- Press Releases
- Awareness Campaigns
- Outbound Calls
- Education

1,000s Buildings

Field Work

- Data Gathering
- Adoption Facilitation
- Surveys
- Documentation
- Follow Up

LEED Facilitation

- LEED Process Tracking
- Track Utility Documents
- Track Aggregator Docs
- Track Vendor Docs

LEED Certification Process USGBC

Research Agenda

- Segmentation Analysis
- Business Cases
- Process Reviews & Issues
- Surveys
- Technologies and data mgmt.
- Load Reduction Scenarios
- Market Rules Impact Analysis

Research Database

Published

USGBC

DRCE Sponsors

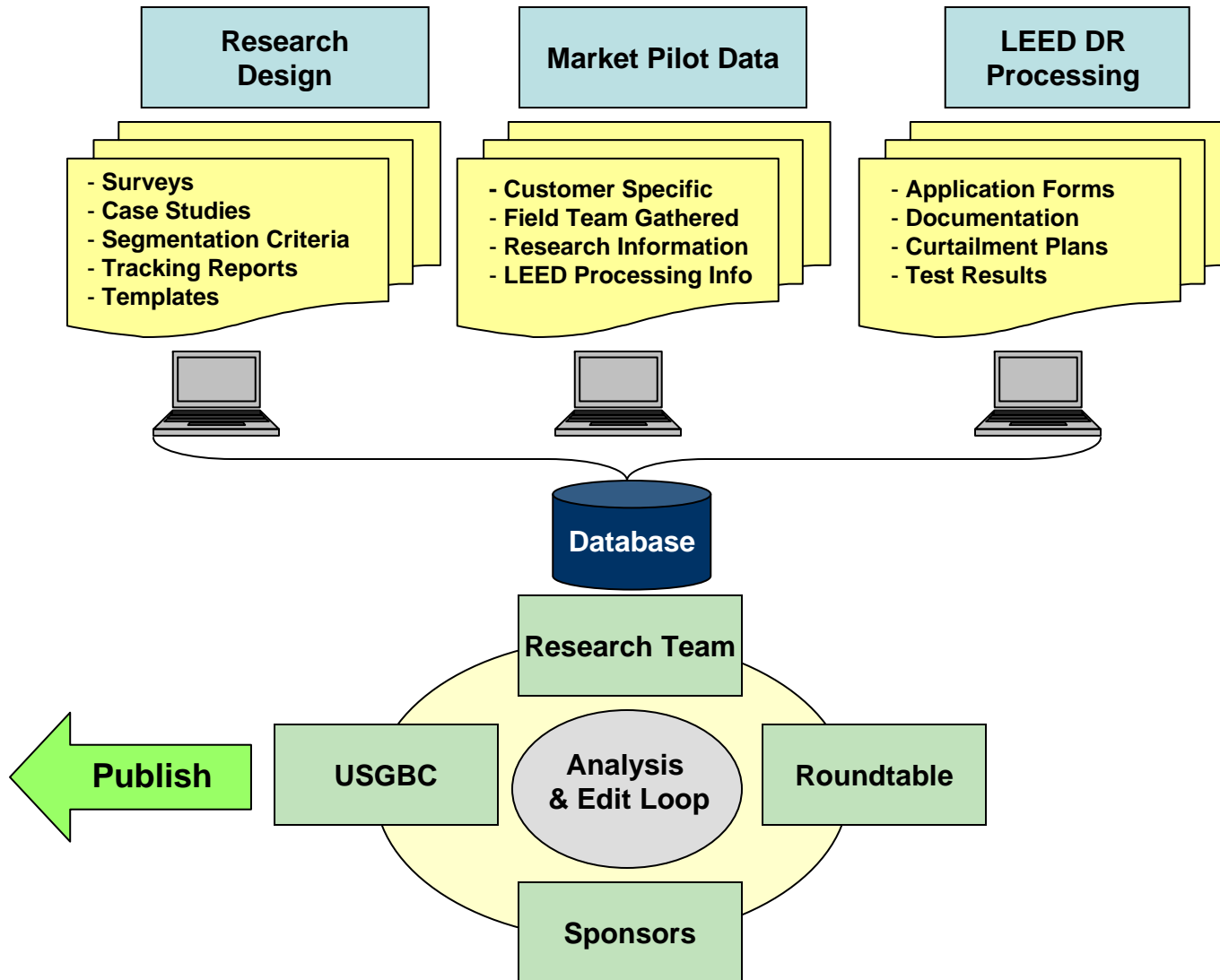
USGBC

Sponsors

Utilities



LEED DR Research Methodology



LEED DR Research Agenda

- **OBJECTIVE:** Develop and implement a research agenda that will foster understanding and adoption of DR by both the building and energy communities.
- **DR Research Framework:**
 - National Database of DR Programs
 - Adoption Measurement
 - Non Participant Survey
 - Segmentation Studies
 - Business Cases
 - Curtailment Scenarios
 - Implementation Methodologies
 - Process Tracking and Barriers Measurement
 - Program Benchmarking
 - Building Preference Measurement

USGBC LEED Credit Rollout Now in Planning For Phase II

Phase II

Market Pilots

- 3 or 4 utility service territories
- Outreach to thousands of buildings
- Education, application assistance and research agenda
- **Assist buildings in DR Adoption through LEED**

Research/ Market Feedback

- Research Agenda
- Case Studies, Process Reviews, Scenarios
- Pilot Utility & Sponsor Feedback

USGBC is Seeking Market Participation

- Utilities
- DR Community
- Building Community
- Funding Sponsors
- Service Providers
- Market Enablers
- Market Operators
- Regulators
- Enabling Technologies

Contact Skipping Stone
For More Information

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