

SMART Wind Manufacturing Forum

**Developing a Consensus-Based
Sustainable Manufacturing, Advanced Research & Technology
Roadmap for Distributed Wind**

**September 30, 2015
Sacramento, CA**





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SMART Wind Roadmap Contents

Foreword: Roadmap to Reach 30 GW by 2030 Vision

Executive Summary

Chapter 1: Introduction *Rationale on importance of document*

Chapter 2: State of Distributed Wind Turbine Industry & Market Opportunities

Baselines & benchmarks, growth potential, project's market impact-LCOE goal

Chapter 3: SMART Wind Consortium Overview *Domestic content, subgroups, participants*

Chapter 4: Distributed Wind Turbine Technology, Manufacturing Opportunities & Actions

Technology & manufacturing barriers & actions, soft cost barriers & opportunities, summary of prioritized actions

Chapter 5: Research and Partnering Opportunities & Actions *U.S. DOC, DOE, Research & Testing Laboratories, Universities & Technical Colleges, State Agencies*

Chapter 6: Action Plan to Address Industry Barriers

Increase global sales, OEM profitability, US manufacturing & jobs

Chapter 7: Strategy Summary and Conclusions

Key recommendations, next steps, DWEA Sustainability Plan

References, Appendices *Baseline & benchmark info, agendas, Consortium directory*

Key Roadmap discussion items

Aggregated Bill of Materials (% Cost by Subgroup)

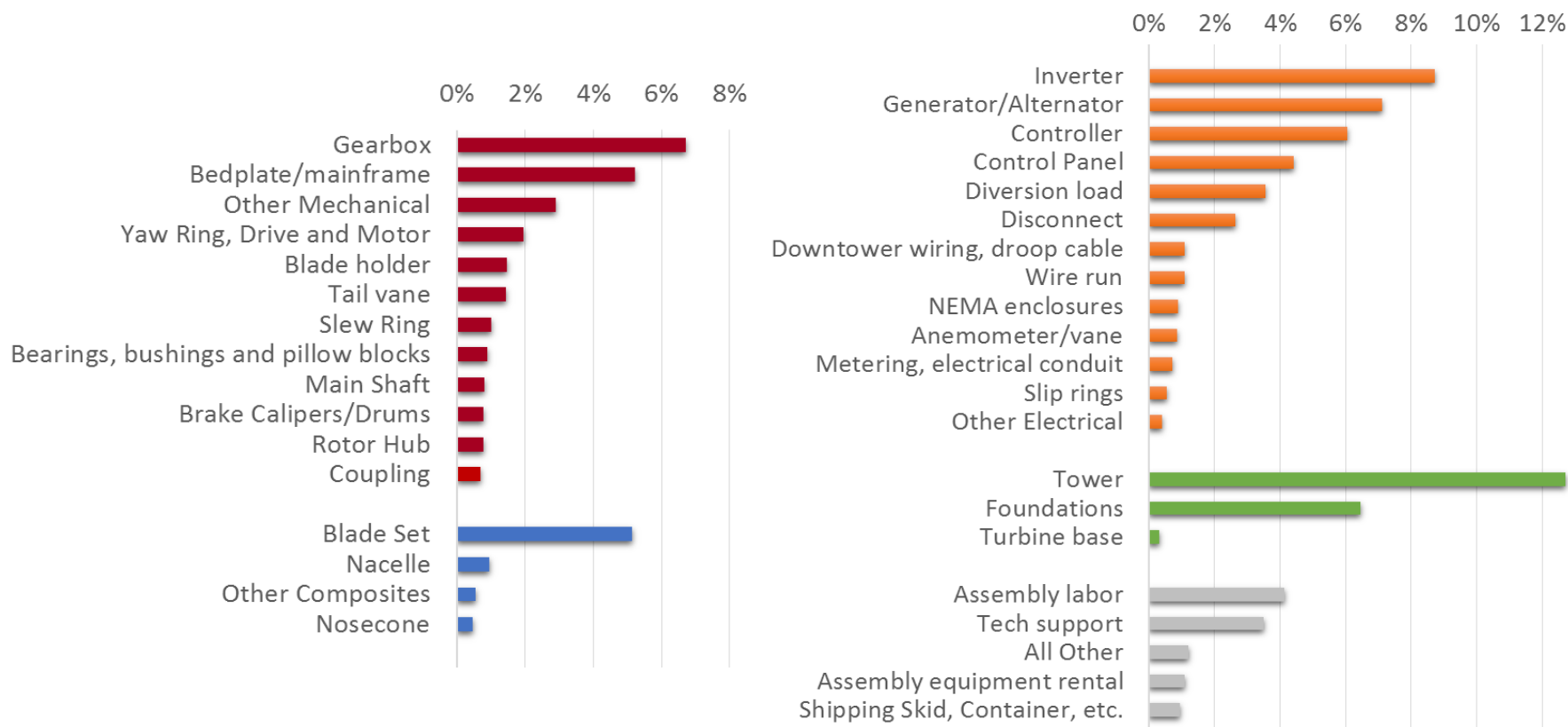


Figure 2-3. Aggregated BOM for SMART Wind OEMs

U.S. distributed wind global supply chain

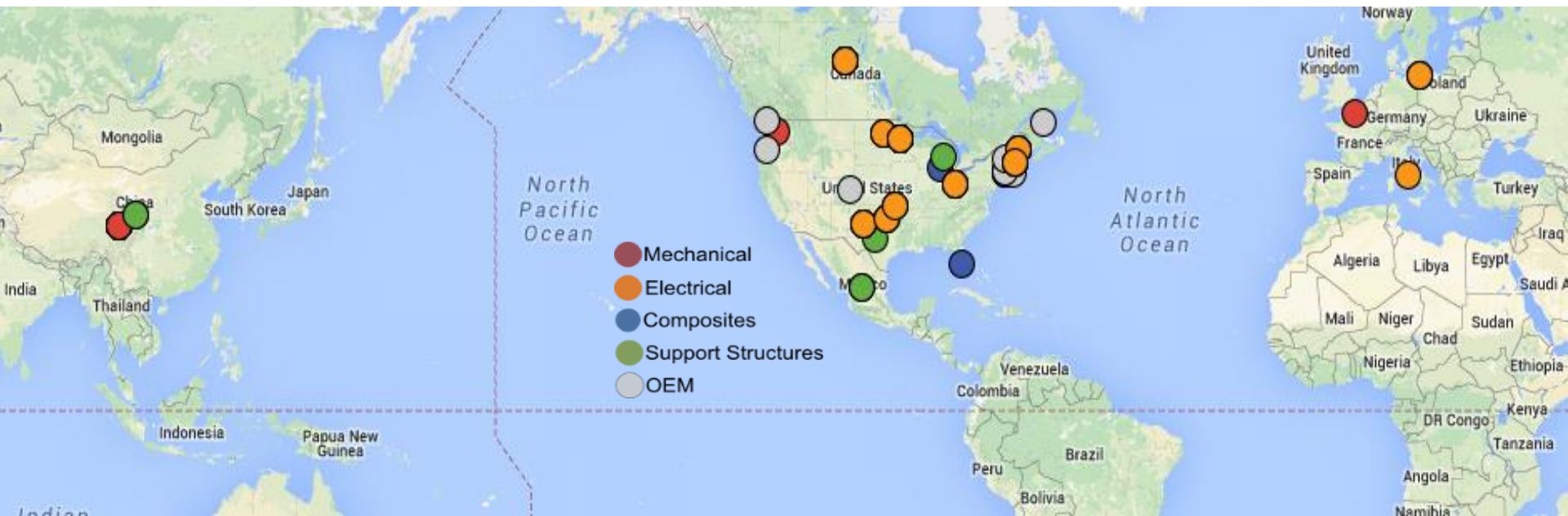


Figure 2-5. Known locations of component suppliers

Key Benchmark: Cost Reduction Targets

DWEA 2025 targets:
\$3.20-\$4.50/Watt installed,
>35% avg capacity factors,
LCOEs of 7¢-10¢ per kWh

SMART Wind's impact:
Substantially reduce LCOE of
within next 5-10 years,
achieving parity with
U.S. retail electricity grid rates
in more markets

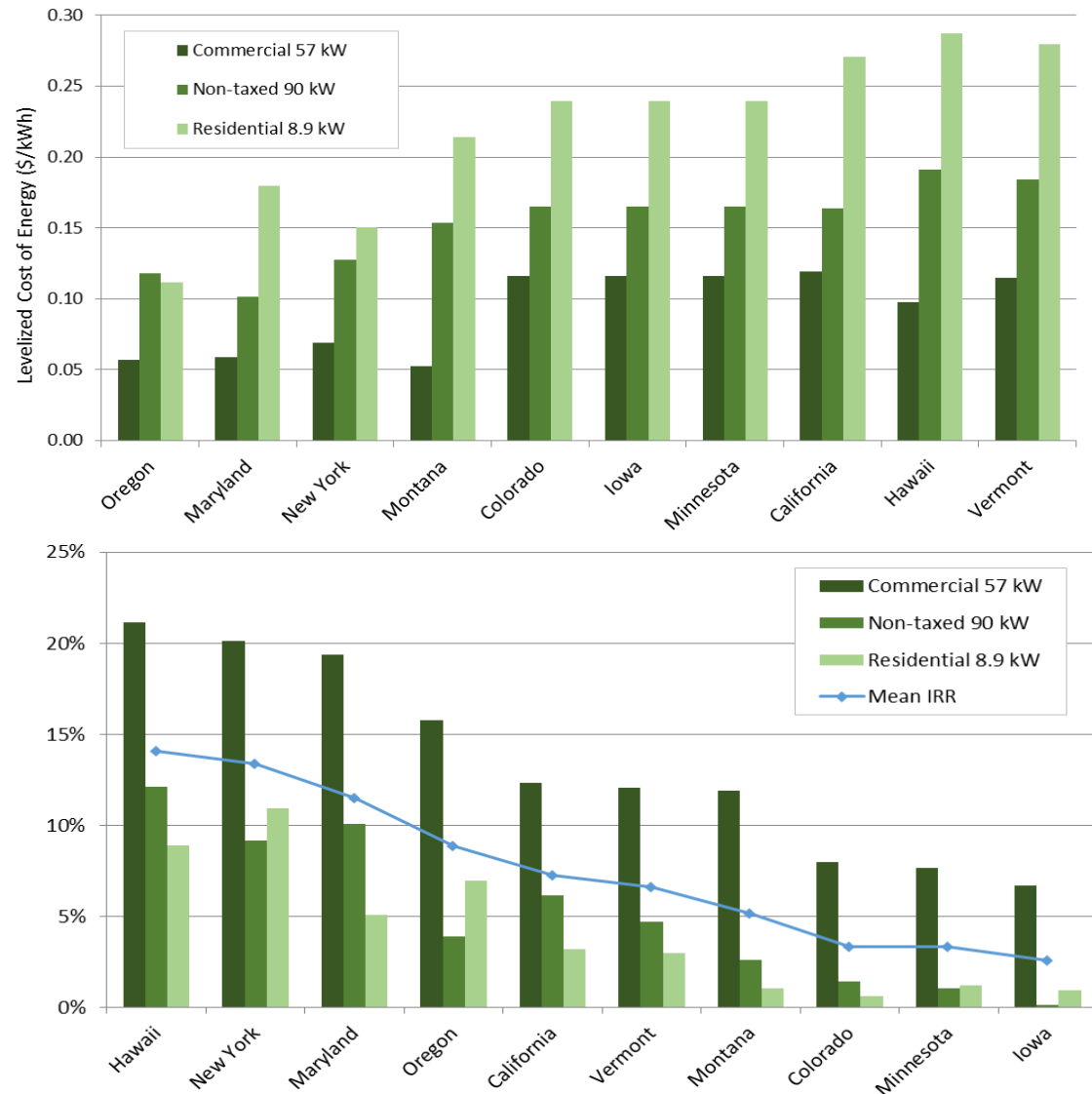
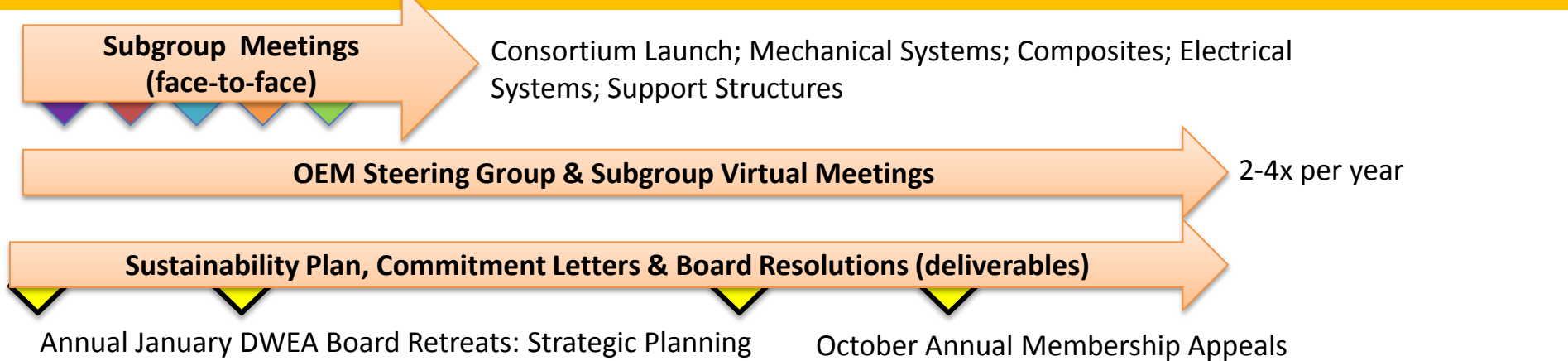


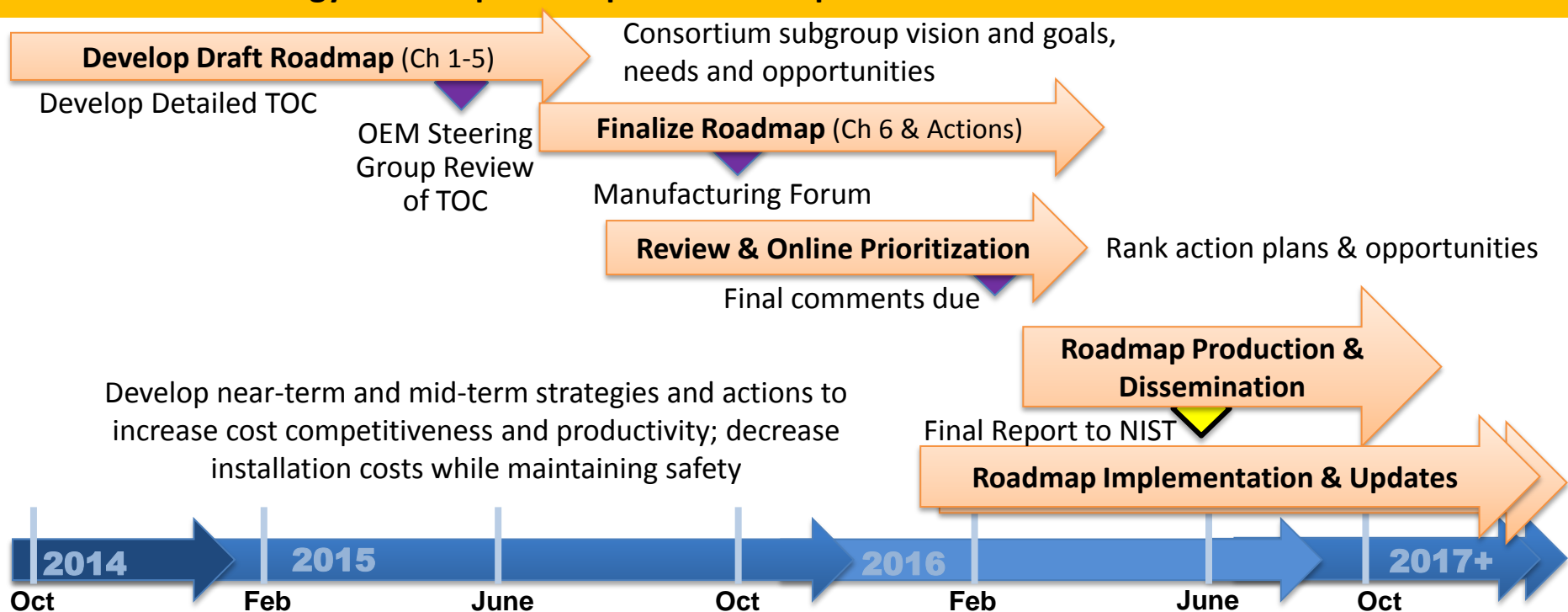
Figure 2-7. LCOE and IRR selected DW Policy Tool baseline results as of Fall 2015

Next Steps: Sustaining SMART Wind Collaboration

SMART Wind Consortium Development and Transition to DWEA Standing Committee



SMART Wind Technology Roadmap Development and Implementation



SMART Wind Consortium Virtual Meetings

Mark your calendar for upcoming monthly SMART Wind virtual meetings

Next in series: 2:30 pm ET Wednesday, October 28

- Past, Present & Future Blade Design (Oct 28, 2015)
- Tower & Foundation Design (Nov 18, 2015)
- PAST
- Condition/Health Monitoring (Jan 2015)
- Rare Earth Magnets in Distributed Wind (April 2015)
- Composite Materials & Process Opportunities (July 2015)
- Inverters & Variable Frequency Drives (August 2015)
- Reducing Installation Costs (May 2015)
- PEIC & SMART Wind Collaboration (June 2015)

Final SMART Wind Manufacturing Roadmap & Next Steps meeting in conjunction with Distributed Wind 2016 Feb 23-25 in Washington, DC

Register at www.distributedwind.org/smart-wind-consortium



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