

US EPA ARCHIVE DOCUMENT



CLEAN efforts in California

Clean Local Energy Accessible Now (CLEAN)

Ted Ko

Associate Executive Director

Clean Coalition

ted@clean-coalition.org

www.clean-coalition.org

Mission

Accelerate the transition to cost-effective clean energy while delivering unparalleled economic benefits

Board of Advisors

Jeff Anderson

ED, Clean Economy Network

Josh Becker

General Partner, New Cycle Capital

Jeff Brothers

CEO, Sol Orchard

Jeffrey Byron

Former Commissioner, California Energy Commission

Rick DeGolia

Executive Chairman, InVisM, Inc.

Mark Fulton

Managing Director, Global Head of Climate Change Investment Research, DB Climate Change Advisors, a member of the Deutsche Bank Group

John Geesman

Former Commissioner, California Energy Commission

Patricia Glaza

ED, Clean Technology & Sustainable Industries

L. Hunter Lovins

President, Natural Capitalism Solutions

Dan Kammen

Chief Technical Specialist for Renewable Energy and Energy Efficiency, World Bank

Fred Keeley

Treasurer, Santa Cruz County, and Former Speaker pro Tempore of the California State Assembly

Felix Kramer

Founder, California Cars Initiative

Governor Bill Ritter

Director, Colorado State University's Center for the New Energy Economy, and Former Colorado Governor

Terry Tamminen

Former Secretary of the California EPA and Special Advisor to CA Governor Arnold Schwarzenegger

Jim Weldon

CEO, Solar Junction

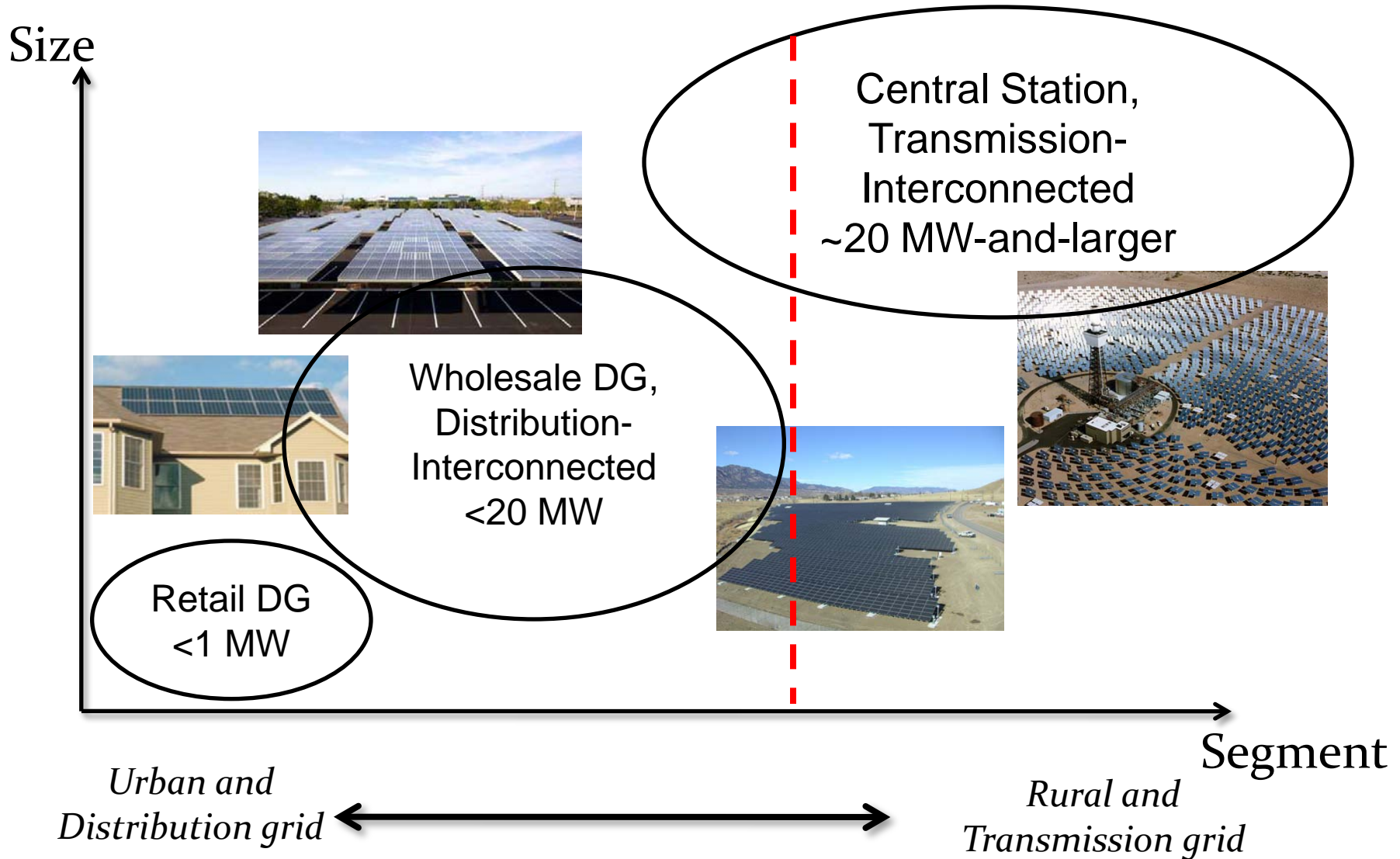
R. James Woolsey

Chairman, Woolsey Partners, and Former Director of the CIA

Kurt Yeager

ED, Galvin Electricity Initiative

Wholesale Distributed Generation (WDG) = Solution



- CLEAN Features:
 - Standard and guaranteed contract between the utility and a renewable energy facility owner
 - Predictable and streamlined distribution grid interconnection
 - Predefined and financeable fixed rates for long durations
- CLEAN Benefits
 - Removes the top three barriers to renewable energy
 - The vast majority of renewable energy deployed in the world has been driven by CLEAN Programs
 - Allows any party to become a clean energy entrepreneur
 - Attracts private capital, including vital new sources of equity
 - Drives local employment and generates tax revenue at no cost to government

CLEAN Programs provide **Transparency, Longevity & Certainty (TLC)*** to the **WDG energy market** by removing the main barriers to the sale of clean local energy to utilities.

Procurement

- **Barrier:**
Securing a contract to sell renewable energy involves high transaction costs and risks
- **Solution:**
Standardized contract terms and rates for long duration

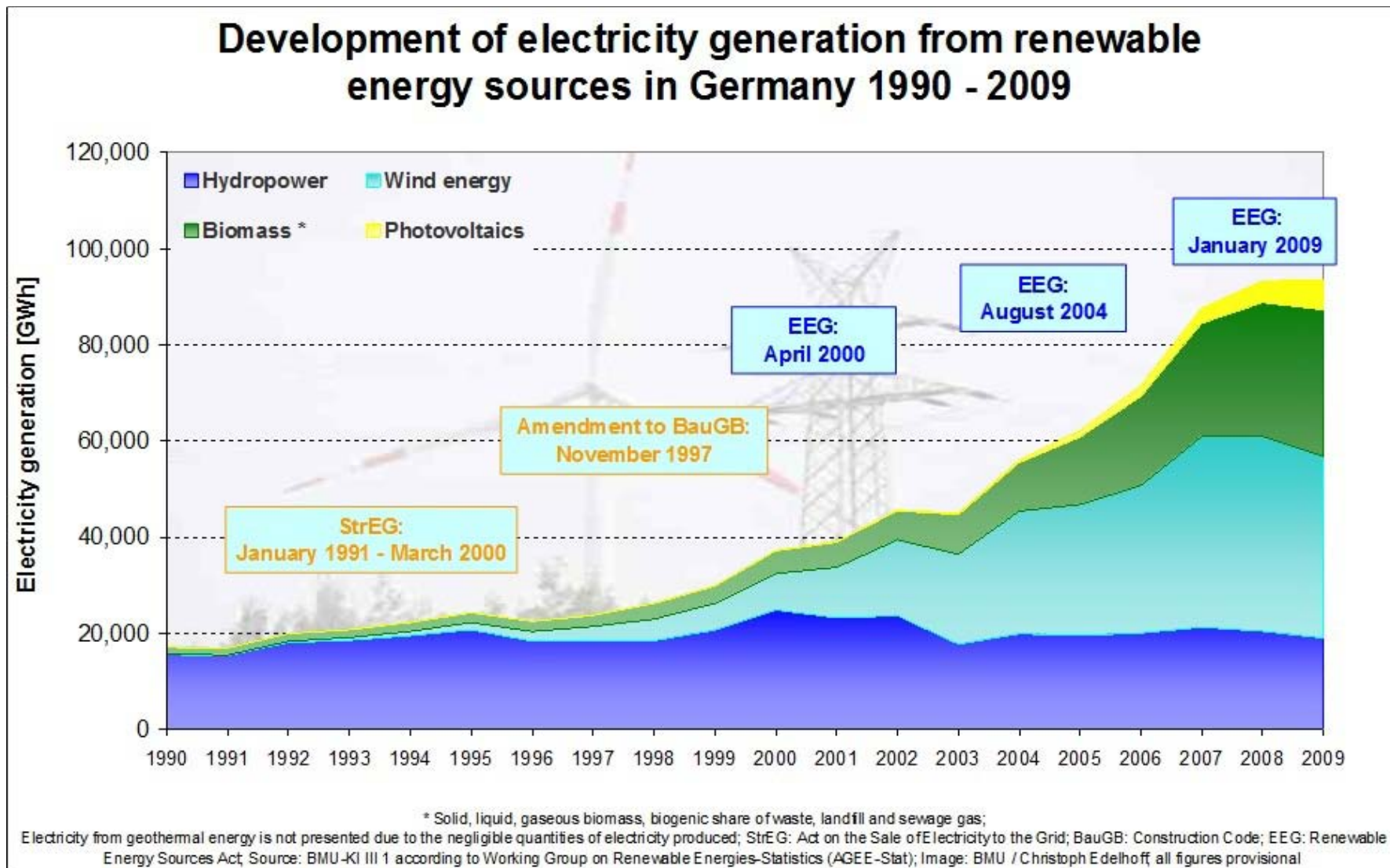
Grid Access

- **Barrier:**
Gaining access to the distribution grid is risky, expensive, and time-consuming
- **Solution:**
Transparent and streamlined distribution grid interconnection process

Financing

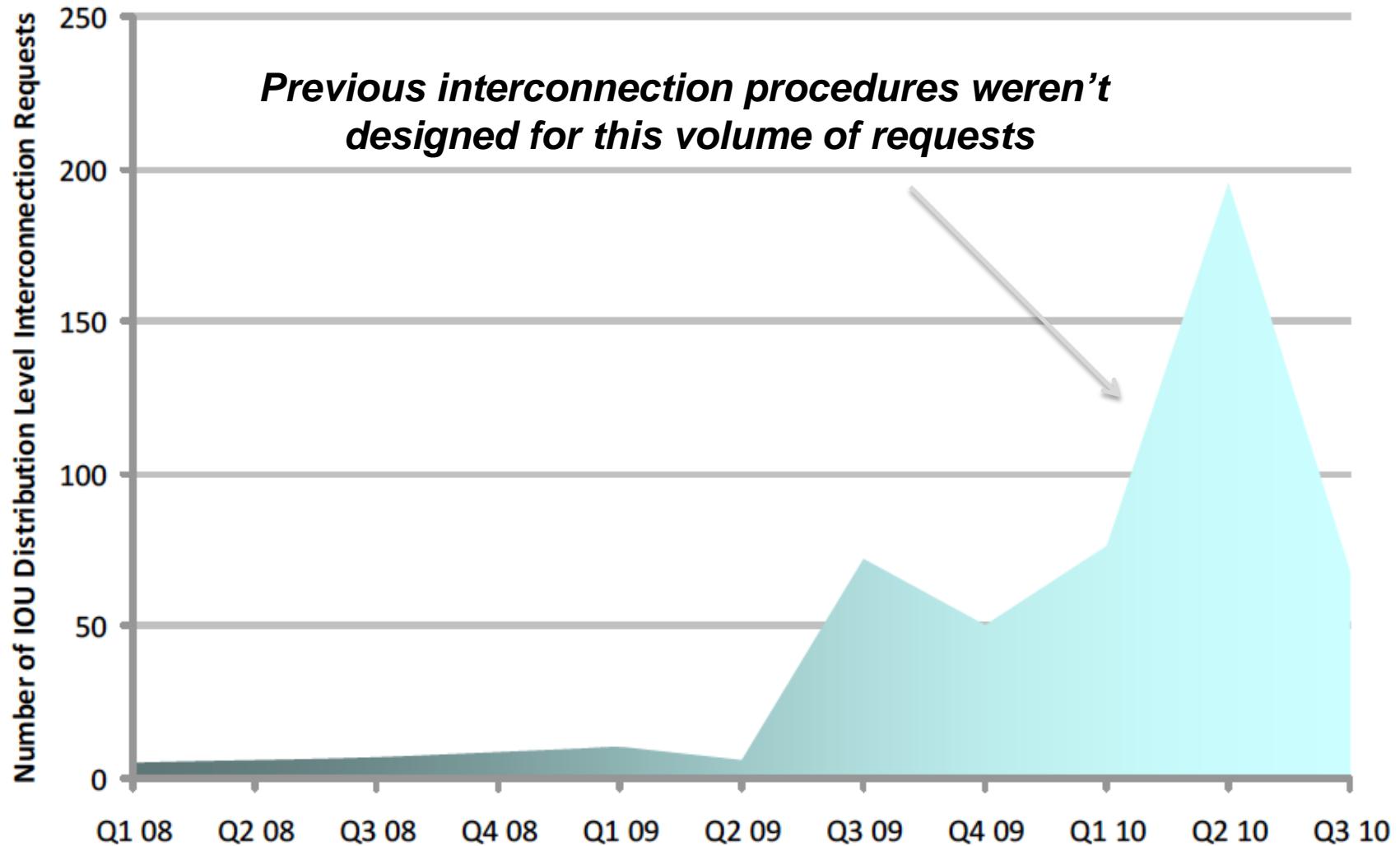
- **Barrier:**
Risk associated with other noted barriers and lack of secure financial basis to attract investors and lenders
- **Solution:**
Predictable cash flow stream from a low credit-risk source (the utility)

* See Deutsche Bank Climate Change Advisors report at http://www.dbcca.com/dbcca/EN/_media/German_FIT_for_PV.pdf



- SB32 - CA CLEAN law passed in 2009, modified in 2011
 - Previous AB1969 FIT produced very little
 - Implement SB32 ASAP, CPUC is moving aggressively
 - Projects up to 3 MW
 - New Pricing Models
 - Unclear how to ensure that Bioresources can access this program
- Renewable Auction Mechanism (RAM)
 - Each of the three major utilities will hold an auction this fall
 - Technologies separated by generation profile: Peaking, non-peaking, baseload
 - Specified megawatts (MW) set aside for baseload – well suited to bioresources.
 - Must have already completed Phase 1 of interconnection

D-Grid Interconnection Requests



Source: California Public Utilities Commission, 4th Quarter 2010

- Interconnection desperately needs reform
 - Confusing mix of tariffs, jurisdiction, rules
 - Unpredictable timelines, costs : expected average of 2+ years
 - Missing key policy requirements: Transparency and Certainty
- Wholesale Distribution Access Tariff (WDAT)
 - Federal jurisdiction – “reformed” in early 2011
 - Needs data transparency and accountability to the rules
- Rule 21
 - CPUC jurisdiction – initially targeted at Retail DG
 - CPUC has initiated “faster” settlement process
 - Major rework to handle large volumes of Wholesale DG



CLEAN ⚡ **COALITION**
Making Clean Local Energy Accessible Now

Local CLEAN Program Guide

Module 1: Overview & Key Considerations



- Targeting communities and individual utilities with **Local CLEAN Program Guide**
- How-to manual for creating CLEAN Programs
- Could be used by municipal utilities, cities, CCA orgs, etc.
- Accessible to all via free download

www.EnergyJobsNow.org



RAEL
UC Berkeley



Back-up Slides

- Local CLEAN Programs
 - Gainesville (early 2009)
 - Sacramento (early 2010)
 - San Antonio (June 2010)
 - Los Angeles (expected 2011)
 - Fort Collins, CO (expected 2011)
 - Palo Alto, CA (expected 2011)
 - Local CLEAN Program Guide (2011)
 - www.Clean-Coalition.org/local-action

- State CLEAN Programs
 - Vermont enacted the first statewide program in mid-2009
 - Hawaii and Oregon enacted programs in 2010
 - Connecticut is moving Governor-sponsored CLEAN legislation
 - CLEAN California Campaign
 - www.EnergyJobsNow.org

Free download: <http://www.Clean-Coalition.org/local-action>

Contact us: LocalGuide@Clean-Coalition.org

Structure of the Guide:

Module 1: [Overview & Key Considerations](#)

Module 2: [Establishing CLEAN Contract Prices](#)

Module 3: Understanding the Avoided Cost of Generating Energy

Module 4: Selecting the Program Size and Rate Impact

Module 5: Quantifying the Economic Benefits of CLEAN Energy

Module 6: Designing CLEAN Program Policies & Procedures

Module 7: Generating Support for a CLEAN Program

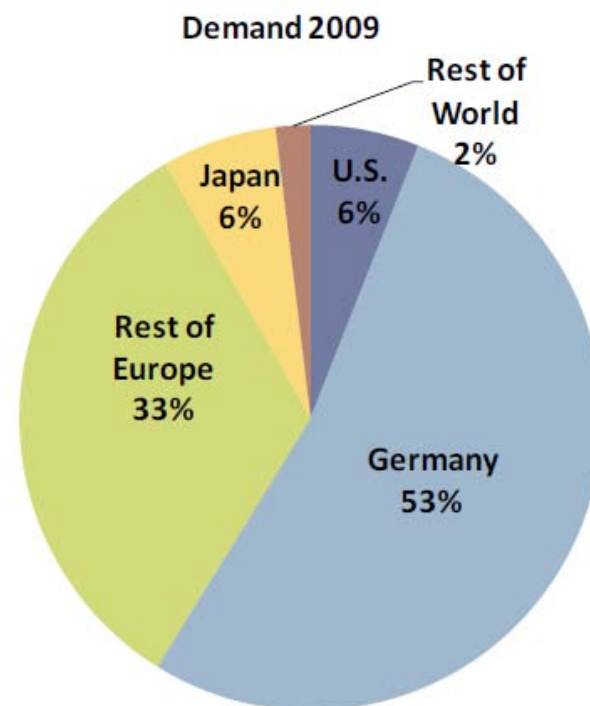
- Most expensive German CLEAN rate is set for solar
- Germany's weighted average solar rate is about US\$0.30/kWh
- In Colorado, the equivalent rate would be less than \$0.12/kWh
 - Tax credits in US reduce the German rate by 40%
 - Investment Tax Credit (ITC) and Accelerated Depreciation
 - Solar resource is at least 50% better in Colorado, which reduces German rate by more than an additional one-third
- Effectively: 30 cents/kWh goes to 18 and then to less than 12

German PV rate of 30 cents is equivalent to less than 12 cents in Colorado

CLEAN Programs (also known as **feed-in tariffs**) are the most effective policy solution for spurring renewable energy installations around the world

CLEAN Programs are responsible for **45% of all wind energy** and **75% of all solar PV capacity** installed in the world **before 2008**
(National Renewable Energy Laboratory)

CLEAN Programs are responsible for **86% of the solar capacity** deployed in the world in **2009**
(Navigant Consulting, Meister Consultants Group)



Source: Navigant Consulting