Green Chemistry in California: A Framework for Leadership in Chemicals Policy and Innovation

California Policy Research Center, UC Office of the President
Center for Occupational and Environmental Health,
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Overview

1) Background

2) Committee motivation

3) Key issues

4) Recommendations
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The Emergency Services: 1978-1996

U.S. Coast Guard Reserve, Monterey

Santa Cruz Ambulance Service, Inc.

Salinas City Fire Department
Hexane-induced peripheral neuropathy in the California vehicle repair industry.
Worker exposures to hexane: an unintended consequence of ARB perchloroethylene phase-out in California.
The UC Report:
• Assesses problems and opportunities
• Makes policy recommendations

Commissioned January 2004 by:
• Byron Sher  (Chair, SEQC)
• John Laird  (Chair, ACESTM)

Released by UCOP March 14, 2006 to:
• Joseph Simitian  (Chair, SEQC)
• Ira Ruskin  (Chair, ACESTM)

Download, & media coverage:
http://coeh.berkeley.edu/greenchemistry1.htm
Overview

1) Background

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4) Recommendations
1) Legislative bills

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<th>AB 121 (Vargas)</th>
<th>AB 263 (Chan)</th>
<th>AB 289 (Chan)</th>
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2) California sustainability

Source: California Dept of Finance, CA pop. trends, 1990 – 2050

2006 = 36 million
3) The European Union

- WEEE......2005
- RoHS......2006
- REACH....2007
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UC chemicals policy analysis

Problems

- TSCA, other statutes
  - Data Gap
  - Safety Gap
  - Tech. Gap
    - Market flaws
      - Downstream users
      - Chem. producers
      - GC entrepreneurs
    - Regulatory flaws
      - State agencies
      - Local agencies
      - The CA Legislature

Condition not sustainable

Drivers of change - opportunities

- E.U. Directives
- Downstream users
- Industry leaders
- NGO activity
- Green chem. entrepreneurs
- Public opinion
- California Legislature
- Government procurement
- Climate change
- National Academy

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Safety Gap
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Problems

Drivers of change - opportunities

E.U. Directives

Downstream users

Industry leaders

NGO activity

Green chem. entrepreneurs

Public opinion

California Legislature

Government procurement

Climate change

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**Policy objective:**
- Correct existing problems
- respond proactively to drivers of change
- motivate green chemistry investment

**Policy strategy:** Close the Data, Safety & Technology Gaps

**In choosing not to act:**
- existing problems will expand
- drivers of change will leave California behind
- green chemistry will develop haphazardly
…the *design* of chemical products and processes to reduce and/or eliminate substances hazardous to human health and the environment.

California has demonstrated that public policy can motivate technology innovation & change.

Total electricity use per capita, kWh, 1960 - 2002

KWh

0
2,000
4,000
6,000
8,000
10,000
12,000
14,000


California

U.S.

Courtesy John Wilson, California Energy Commission
Thank you!