

2018: A CCST MILESTONE

30th year for CCST, 10th year for Fellows program

Events lined up beginning with Science and Technology Week, kicking off with a declaration on the floor of the Assembly and Senate



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Following is an update on:

Membership

S&T Week

Programs

S&T POLICY FELLOWS

FEDERAL LABORATORIES

CALTAC

EXPERT BRIEFINGS

Projects

CCC MAKER INITIATIVE

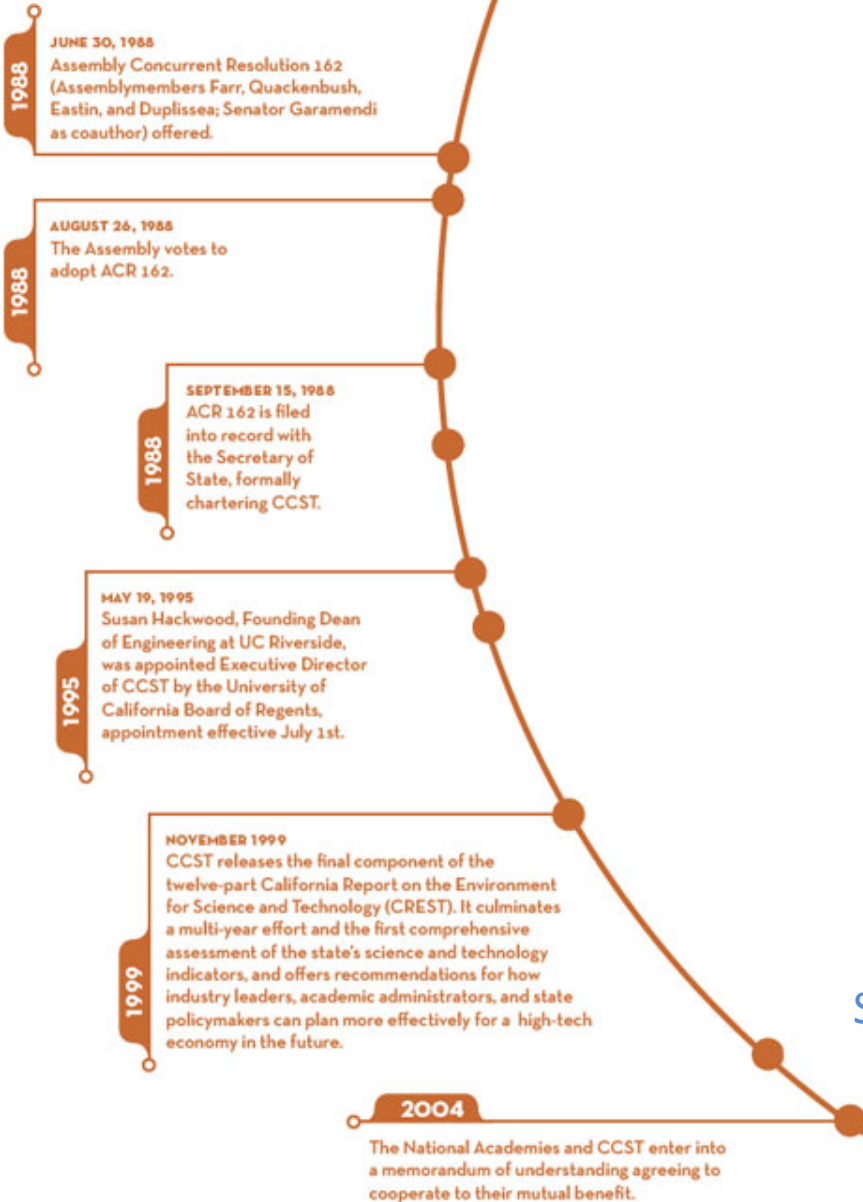
VIABILITY OF UNDERGROUND NGS

BIOMETHANE

SB1281: WATER USE & TREATMENT IN OIL & GAS ACTIVITIES

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Budget & Fundraising





Membership

2017 transitions in membership included thanking **Corey Goodman** for his long service as a Council member and the last three years as Chair of CCST Council. We also thank **Peter Cowhey, Soroosh Sorooshian** and **Terry Lewis** for their service. **Jeff Dozier, Susan Hubbard** and **Dan Sperling** have agreed to serve a second three-year term.

We welcome new council members-elect:

- **Judy Miner** – Chancellor, Foothill-DeAnza Community College District
- **Rob Ogelsby** - Executive Director (retired), California Energy Commission
- **Steve Zornetzer** - Former Associate Center Director, Research and Technology, NASA Ames Research Center
- **Jessie Westbrook** - Sandia National Laboratories Livermore, and 2009 CCST Science Fellow

New Senior Fellows include:

- **Marianne Walck** – former Board member
- **Soroosh Sorooshian** – former Council member



CCST SCIENCE & TECHNOLOGY WEEK

February 20-23, 2018
California State Capitol

A CELEBRATION OF SCIENCE AT YOUR SERVICE!

- Assembly & Senate Floor Resolutions
- Science Translators Showcase
- CCST Expert Briefing on Makerspaces
- CCST Leadership Awards Reception
- Federal Labs and Research Centers Benefiting California: Impact Report

2018 Fellows

Dylan Chapple – Assembly Natural Resources Committee

Keith Cialino – Assembly Water, Parks, and Wildlife Committee

Teresa Feo – Senate Office of Research

Chris Francis – Senate Budget and Fiscal Review Committee

Amy Gilson – Assembly Environmental Safety and Toxic Materials Committee

Magdalena Gutowska – Senate Environmental Quality Committee

Monica Montano – Assembly Health Committee

Sandra Nakagawa – Assembly Judiciary Committee

Naomi Ondrasek – Assembly Education Committee

Jeffery Song – Senate Transportation and Housing Committee



CCST Fellows Alumni

Funding: Grant from the WHH Foundation

Created in 2013, the group is an excellent forum to maintain connections, foster discourse, and help former Fellows advance their goals of continuing to contribute to public policy.

The Alumni are led by a Steering Committee co-chaired by **Sarah Brady** and **Dharia McGrew**.

Ongoing events include a monthly happy hour and a Luncheon Professional Development Series. Alumni also remain engaged in adaptation and improvement of training for new Fellows.



BEYOND CALIFORNIA



Background: CCST, in partnership with the Moore Foundation and the Simons Foundation, has provided grants of up to \$25K to support planning processes to create similar Fellowship programs in other states. **Nine states** received grants last year, and they are submitting final progress reports. CCST also conducted a workshop “Science Supporting Policy at the State Level” at the 2017 AAAS meeting.



BERKELEY LAB



**Lawrence Livermore
National Laboratory**



**NATIONAL
ACCELERATOR
LABORATORY**



**Sandia
National
Laboratories**



Ames Research Center



Jet Propulsion Laboratory



NATIONAL RENEWABLE ENERGY LABORATORY

Background: CCST receives \$145,000 annually from seven affiliate members. CCST’s role is to help California decision makers identify and seek expertise from California’s Federal research facilities to inform policy issues. CCST also communicates with Federal Laboratories to help them recognize policy priorities and needs of state leaders.

Update: CCST originally added six Federal research facilities in California. In 2017, CCST formalized a relationship with its first out-of-state federal laboratory partner – the National Renewable Energy Laboratory (NREL).

The Laboratory Affiliates are navigating the addition of the first new affiliate since the inception of these partnerships. NREL works closely with state decision makers and expands CCST’s network of expertise.

new report, **Federal Labs & Research Centers Benefiting California: 2017 Impact Report for State Leaders.**



CalTAC
CALIFORNIA TEACHER ADVISORY COUNCIL

BACKGROUND: CCST created CalTAC in 2005 to help give California science, technology, engineering, and mathematics (STEM) teachers a voice in policy discussions involving STEM education.

Update: In 2017 CCST led the workshop “How Can STEM Teachers Become Effective, Impartial Voices in Public Policy?” at the 2017 National Conference of the National Association of Science Teachers (NSTA), held in Los Angeles.

CCST also developed a pilot suite of **Policy Webinars** for CalTAC members. Four were developed and hosted in 2017:

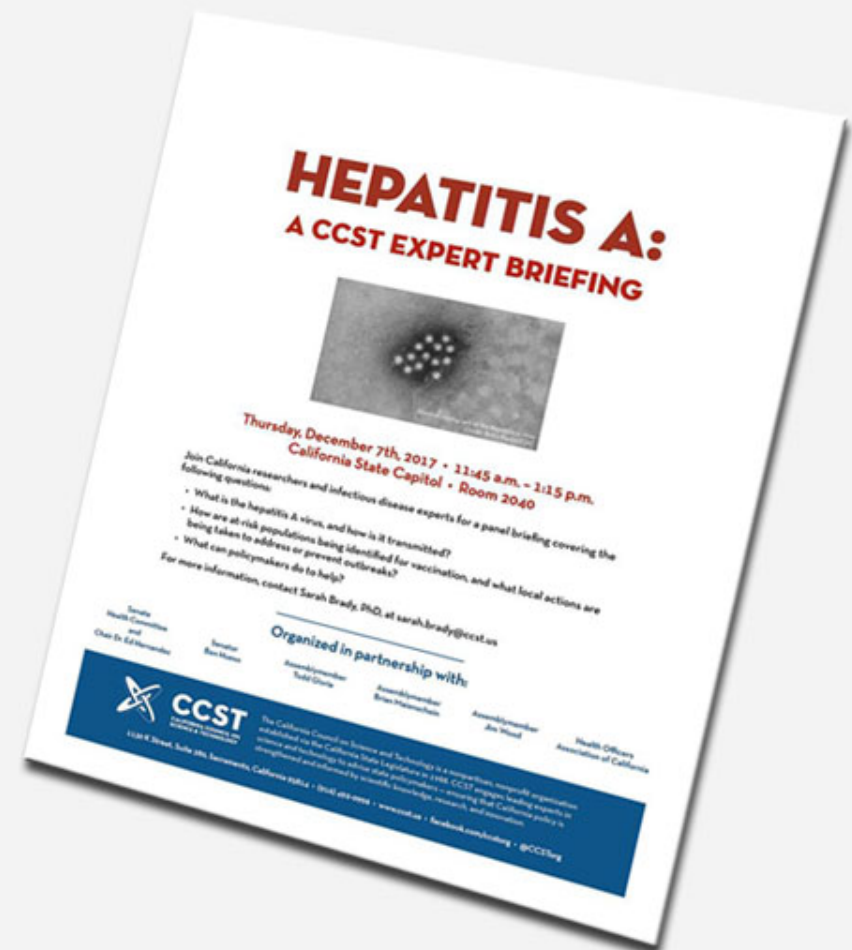
- **How a Bill Becomes a Law in California** (Presented by Sarah Brady, PhD)
- **The Legislative Meeting: Advice vs Advocacy** (Presented by Sarah Brady, PhD)
- **The State Executive Branch** (Presented by Science Fellow Alum Gabby Nepomuceno, PhD)
- **Experiences of a Former Teacher in the California Policymaking World** (Presented by former Assemblywoman Susan Bonilla)

CCST EXPERT BRIEFING SERIES

Expert Briefing series on Hepatitis A. This is a new service we are offering to decision makers to proactively deliver scientific expertise on emerging issues of concern.

This type of expert briefing will be a regular occurrence. We followed up with our expert briefing on underground natural gas storage (UGS) upon the release of CCST's peer-reviewed report and will be hosting a Makerspace expert briefing as part of S&T Week.

In March, another UGS briefing with more focus on the role of natural gas in California's path to reaching our greenhouse gas emission reduction goals by 2050.





CALIFORNIA COMMUNITY COLLEGES MAKER INITIATIVE

Funding: \$350K - Sierra Joint CC District • Audience: CCC, National Maker Community • Timeline: 9.13.16 - 6.30.19

BACKGROUND: The CCCCO Doing What Matters for Jobs and the Economy Framework is setting up a network of makerspaces. 36 community colleges are involved with a budget of \$17M.

In 2017 24 colleges were selected to receive funds. CCST has served in an advisory role since the start of CCC Maker, and organized the **CCC Maker Kickoff Symposium** (8.18.17) at UC Berkeley.

In 12/17 CCST produced an **overview report** on the impact of the Maker Movement on K-12 institutions.

CCST continues to deliver information and guidance to the CCC Maker Group, including the preparation of 2 symposia scheduled for Spring 2018, and CCC maker teams presenting papers at ISAM in August 2018.



VIABILITY OF UNDERGROUND NATURAL GAS STORAGE

Funding: \$2.5M, State of California • Audience: CPUC, Governor Brown, State Legislature • Timeline: Jan. 2017 - Jan. 2019

BACKGROUND: The Governor proclaimed a state of emergency on 1.6.16 related to the Aliso Canyon natural gas storage facilities leak. To address part of the proclamation, CPUC, in consultation with other state commissions and agencies, requested CCST undertake **an up-to-date, technical assessment** of the 13 NGS fields in California.

CCST conducted a broad review to address three central questions:

- 1:** What are the risks to health, safety, environment, and gas storage system infrastructure at California's subsurface gas storage facilities?
- 2:** In the near term (through 2020), what role does gas storage play in gas supply reliability and in meeting the demand for electricity?
- 3:** Given greenhouse gas goals for 2030 and 2050, what viable gas storage facilities and other gas infrastructure will the state likely require?

The report was completed and delivered on time in January 2018.



BIOMETHANE HEATING VALUES

Funding: \$500K, California Public Utilities Commission • Audience: CPUC, Governor, State Legislature • Timeline: Due June 2018

BACKGROUND: SB840 requested CCST to complete a study analyzing minimum heating value and maximum siloxane specifications for the delivery of biomethane to the public gas pipelines and their impacts to cost, volume of biomethane sold, equipment operation, and safety.

CCST is preparing a report with five chapters:

Chapter 1: Heating Value Specification for Pipeline Injection Biomethane

Chapter 2: Siloxane Specifications for Pipeline Injection of Biomethane

Chapter 3: Options for Dilution of Biomethane after Pipeline Injection

Chapter 4: Case Studies of Region-Specific and Utility-Specific Considerations

Chapter 5: Summary and Future Directions

The Steering Committee is meeting weekly and has been actively reviewing chapter drafts. **The draft report will be sent out for peer review in March.**



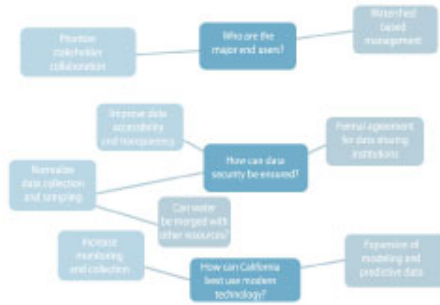
WATER USE AND TREATMENT IN OIL AND GAS ACTIVITIES (SB 1281)

Funding: est. \$493K - Div. of Oil, Gas, and Geothermal Resources • Audience: Legislature, state agencies, public • Timeline: Jan. 2018 - June 2019

BACKGROUND: CCST’s 2013 report “An Independent Scientific Assessment of Well Stimulation in California”, produced in response to SB 4 (Pavley), recommended that the state collect data on water used, produced, and treated in all petroleum industry activities. SB 1281 (Pavley) now requires such data reporting. CCST has proposed a **two-phase early assessment of the required data collection**.

Statement of Work: During **Phase I**, CCST will collaborate with the Division and other agencies to produce a short white paper that will identify important questions, describe the data required to answer them, and clarify how this info may be used to inform decision making. **Phase II** will carry out an early and preliminary assessment of the SB 1281 data set.

CCST has held preliminary meetings with the Division, DWR, and the State Water Board, signed contract January 2018. We are currently assembling a steering committee and contracting subcontractors.



ORGANIZING CALIFORNIA'S WATER INFORMATION SYSTEMS

Funding: No current funding • Audience: State policymakers, State agencies • Timeline: Ongoing

BACKGROUND: CCST's 2014 report "Achieving a Sustainable California Water Future through Innovations in Science and Technology" highlighted the need for greater information on California's water supply and use. Last year, AB 1775, the Open and Transparent Water Data Act was enacted, which requires DWR to create a **statewide integrated water data platform** to integrate existing water and ecological data information from multiple databases.

CCST, DWR, and UCWater have also hosted a series of workshops on creating a comprehensive water data management system. A report capturing these workshop findings has been released and CCST will help disseminate the findings.



Fundraising

Our near-term goals are to develop a major gifts program that:

- Supports CCST Science Fellows at \$1.3M per year and grows the program; promotes funding program through 2020
- Creates a “Rapid Response Team” Fund capitalized at \$1.5 to \$2M to advance the mission of CCST

STRATEGY: 1) build a culture of philanthropy among CCST’s network of science experts and 2) diversify major gift funding sources beyond the original large Fellowship foundation partners.

2017 Highlights:

- Giving Tuesday
- Series of Science and Policy discussion events
- Major Gift outreach events in LA, San Diego, and San Francisco