



# AIChE<sup>®</sup> SUSTAINABILITY GUIDE

- Institute for Sustainability
- Center for Sustainable Technology Practices
- AIChE Sustainability Index
- Credential for Sustainability Professionals
- International Certificate on Sustainable Standards for Engineering, ICOSSE
- Founder Societies' Technologies for Carbon Management



A CORE BODY OF BENCHMARK KNOWLEDGE



AIChE, which established its first sustainability programs in the early 1990s, is a recognized leader in sustainability among scientific and engineering

organizations. Its sustainability work has been supported by a number of companies in the chemical, energy and related industries, and by the U.S. Environmental Protection Agency, Department of Defense, and Department of Energy, among others. AIChE has identified sustainability as a key driver of the profession's and the Institute's future and one which is aligned with AIChE's emphasis on sound engineering and economics.

AIChE's Institute for Sustainability (IfS) is a network of scientific, engineering, and financial experts who work to develop and deploy new technologies and practices through multidisciplinary collaboration. Member companies (and its individual members) benefit from joint projects and pre-competitive research that keeps them on the cutting edge of sustainability technologies and developments. Through participation, sponsors and members shape these projects and inject scientific rigor and real-world business experience into sustainability discussions. IfS has a mission of developing and implementing cost-effective technologies, processes, and practices needed to meet global challenges. It focuses on industrial ecology, sustainable business practices and international sustainable development. Much of this work is carried out by the IfS Center for Sustainable Technology Practices, a group of companies identifying and promoting best practices and roadmaps for making technically sound sustainability decisions.

Visit the Institute for Sustainability at [\*\*www.aiche.org/ifs\*\*](http://www.aiche.org/ifs)

## CENTER FOR SUSTAINABLE TECHNOLOGY PRACTICES



The value of sponsorship in the Center for Sustainable Technology Practices (CSTP) lies in its interaction and learning opportunities. CSTP members share the costs and benefits of research. Members of CSTP include energy, chemical and pharmaceutical companies, as well as other manufacturers and users of chemicals, and engineering contractors. CSTP is also a resource, as well, for smaller companies.

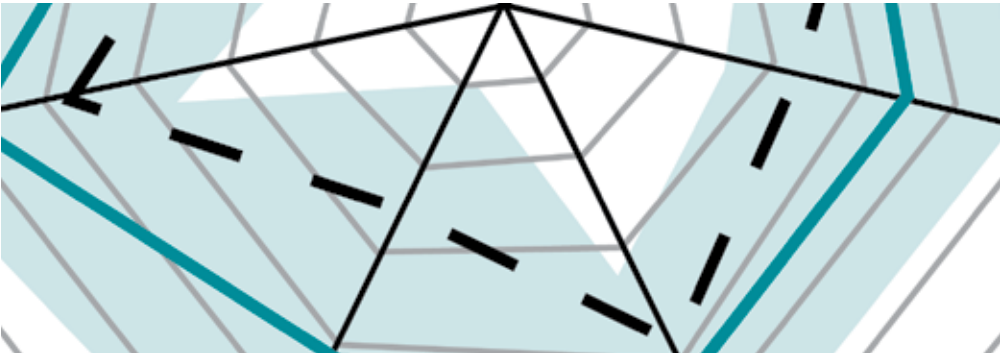
CSTP panels help quantify and develop the business case for sustainability; participate in the development of guidelines; hold meetings, workshops, and education exchanges; receive free copies of CSTP publications, and free access for selected employees to the Sharepoint project development site, and to online reference documents. CSTP sponsors and members also enjoy discounted registration to CSTP sponsored conferences.

Industry representatives in CSTP have developed a guide for implementing sustainability across a company's value chains. The guide maps the workflow of business processes within a company; highlights sustainability decision-points and responsible decision makers; provides support tools and identifies gaps where future support should be directed.

For more information on CSTP, visit

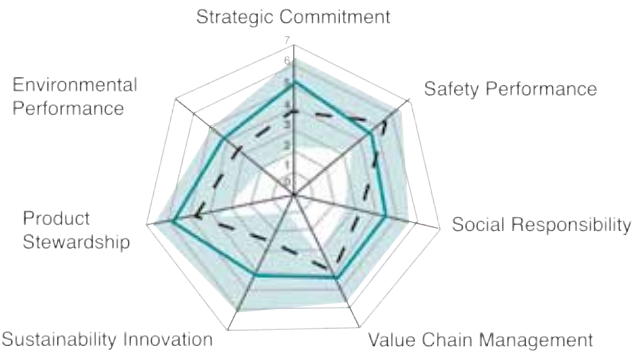
**[aiche.org/ifs/sustainability-credentials/center-sustainable-technology-practices](https://aiche.org/ifs/sustainability-credentials/center-sustainable-technology-practices).**

# AIChE SUSTAINABILITY INDEX



The AIChE Sustainability Index [www.aiche.org/ifs/resources/sustainability-index](http://www.aiche.org/ifs/resources/sustainability-index) assesses the sustainability performance of companies in key industries from seven perspectives: strategic commitment, environmental performance, safety performance, product stewardship, social responsibility, value chain management, and innovation. Engineering and scientific experts developed the AIChE Sustainability Index, using publicly reported data. They calculate the results in each updated release, basing their analysis on individual company and sector-level data. AIChE Sustainability Index aggregate data are published regularly in CEP magazine and elsewhere. The AIChE SI provides a compelling, overall picture of an industry's progress toward sustainability. Expansion of the index to industries outside the chemical processing sector has been funded by the United Engineering Foundation.

Companies may subscribe to confidential reports of their performance in the aggregate AIChE Sustainability Index. Unlike financially-oriented sustainability indices, the AIChE index benchmarks well-defined performance metrics and indicators, including Environmental, Health and Safety performance, innovation, and societal metrics. Subscribers learn sustainability best practices in relevant industries and how their company compares to peers by size, business focus, and many other factors.



# CREDENTIAL FOR SUSTAINABILITY PROFESSIONALS



AICHE Credential for Sustainability Professionals

The Institute for Sustainability is launching a program that offers engineers and scientists a specialized course of instruction that will grow competency in knowledge and application of sustainability. A credential will be provided upon completion of the educational program that provides a strong foundation in seven key areas of sustainability "Body of Knowledge."

The program requires completion of two masters-level classes (from an endorsed list of classes at various universities or on-line) and a group learning capstone course focused on a real world problem. These problems will be submitted by participating firms. The credential will also support the development of engineers who aspire to Professional Engineering Licensure. The program is also planned as a way to help companies control training costs by pooling expertise and having resources pre-screened for quality and readily available.

Go to **[www.aiche.org/ifs/sustainability-credential](http://www.aiche.org/ifs/sustainability-credential)** for details and updates on the Credential Program.

# INTERNATIONAL CERTIFICATE ON SUSTAINABLE STANDARDS FOR ENGINEERING, ICOSSE



## ICOSSE

International Certificate on  
Sustainable Standards for Engineering

Moving to the product or process level, if one wants to consider the overall impact of sustainability of a product or process a company makes or uses, a company can apply for the ICOSSE label. It is a joint

initiative of AIChE and DECHMA (Society for Chemical Engineers and Biotechnology). Two international societies whose authority is recognized by scientists and policy makers alike have joined forces to cooperate on developing standards on sustainability in engineering.

Companies that implement sustainability and integrate it into their production can apply for the ICOSSE certificate. The ICOSSE seal of certified sustainability and resources conservations will give you the competitive edge in the market.

To obtain the certificate, visit <https://icosse.net>. You will find a detailed questionnaire, designed to be applied to products, processes or services that you wish to have certified. It covers the following areas: Environmental performance, safety, product stewardship, life cycle consideration, value chain, innovations and corporate sustainability goals and policies. For each area several questions have to be answered. This forms the basis for the advisory group to rate the applications. If the evaluation is positive, the applicant will receive a certificate and the right to use the ICOSSE logo for marketing purposes of the evaluated products, process or service. The certificate is valid for a period of three years.



# FOUNDER SOCIETIES' TECHNOLOGIES FOR CARBON MANAGEMENT



AICHE IFS is providing leadership to members of the Engineering Founder

Societies (AIChE; American Institute of Mining, Metallurgical and Petroleum Engineers; American Society of Civil Engineers; American Society of Mechanical Engineers; and the Institute of Electrical and Electronics Engineers) in applying their joint expertise to carbon management. The group has selected a scorecard approach as a tool for assessing the merit of various greenhouse gas management options. The scorecards developed so far focus on electric power and transportation systems.

Additional projects include the development of biofuels metrics, energy system boundaries, a carbon capture and sequestration network, greenhouse gas measurement, and gaps and barriers, and the Carbon Management Technology Conference. The group will also be implementing a research coordination network with Columbia University.

Learn more about carbon management at <http://fscarbonmanagement.org/>

institute   
for **sustainability**  
An AIChE Technological Community



**ICOSSE**  
International Certificate on  
Sustainable Standards for Engineering



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