



Semiconductor Climate Consortium

Updated – January, 2026

SUSTAINABILITY

CONNECT - COLLABORATE - INNOVATE - GROW - PROSPER

We welcome companies in the semiconductor ecosystem who will join us in making these commitments*

Support

Join the SCC and support the Paris Agreement and related accords driving the 1.5°C pathway and align on the need to drive climate progress within our industry.



Collaboration

Align on common approaches to continuously improve and reduce greenhouse gas emissions in the semiconductor industry value chain



Transparency

Publicly report progress and Scope 1, 2, & 3 GHG emissions annually according to the guidelines and principles in the GHG Protocol and agree to key underlying assumptions



Ambition

Set near-term and long-term targets in accordance with best available science, with the aim to reach Net Zero greenhouse gas emissions per the GHG Protocol no later than 2050

*Commitments formally spelled out in the SCC Charter
GHG = Green House Gas

Value Proposition

The Semiconductor Climate Consortium is the first global, ecosystem-wide effort to accelerate the semiconductor ecosystem's response to the challenge of climate change by facilitating our member's responses to reduce greenhouse gas emissions.

Members collaborate on dependencies for evaluating Scopes 1-3, help develop and get first access to tools to assist reporting and baselining and help build the case for change with our stakeholders. We improve our industry's climate response with a quantitative and qualitative approach.

We also support innovative ideas utilizing microelectronics to combat climate change and partner with outside organizations to raise awareness of opportunities and best-known methods across all industries.



Semiconductor Climate Consortium

Ambition Statement

The SCC Ambition Statement provides a common guideline on the semiconductor industry's most pressing decarbonization challenges, aiming to foster collaboration across the industry and to call stakeholders' attention to accelerate collective progress toward a Net Zero future.

This Ambition Statement is non-binding, designed to complement, but not replace, each member's own sustainability strategies and roadmaps.

Emissions

SCC is committed to helping its members achieve Net Zero GHG emissions no later than 2050, with an aspiration for the following milestones:

- Scope 1 Emissions: A 43% reduction from 2019 levels by 2030¹
- Scope 2 Emissions: Low Carbon Electricity (LCE²) Transition
 - EU and the Americas: Achieve 100% LCE by 2030
 - Asia Pacific (APAC): Achieve 100% LCE by 2040, with 70% LCE by 2035³

Transparency

- Achieve public reporting of Scope 1 & 2 emissions by more than 95% of members by the end of 2027 and public reporting of relevant Scope 3⁴ emissions by the end of 2028
- By 2028, develop a methodology and reporting framework across our value chain⁵ to enable exchange of relevant and reliable Product Carbon Footprints (PCF)

1 In alignment with the Paris Agreement 1.5 °C pathway, companies may apply the earliest manageable base year and context-appropriate methodologies or scopes, including cases of early reductions or already low baselines from early action.

2 In the context of this Ambition, LCE includes energy from sources that either produce no direct CO2 emissions or substantially reduce emissions through technologies, in alignment with the CDP Climate Change 2023 Reporting Guidance and the IEA.

3 To the pursuit of this Ambition, the establishment of procurement frameworks for all range of LCE in APAC countries is essential.

4 As per the GHG Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

5 Semiconductor manufacturers, materials and chemicals suppliers, equipment manufacturers, and end users.

SCC Membership – By the Numbers



ALL MEMBERS

100+

Members + partners

400+

Individuals reached

1500_{MMT}+

Total emissions represented

63%

Percent Scope 1 & Scope 2 represented

\$1.9T+

Total revenue represented



MATERIAL SECTOR

470_{MMT}+

Total emission represented

\$95B+

Total revenue represented



EQUIPMENT SECTOR

560_{MMT}+

Total emission represented

\$230B+

Total revenue represented



MANUFACTURERS

290_{MMT}+

Total emission represented

\$600B+

Total revenue represented



HYPERSCALER

140_{MMT}+

Total emission represented

\$1T+

Total revenue represented

LEADERSHIP MEMBERS

AMEC · Apple · Applied Materials · ASE · ASM · ASML · BASF · Qnity Electronics · EBARA · Google · Intel Corporation · JSR · KLA · Lam Research · Microsoft · NXP · Samsung Electronics · SanDisk · Schneider Electric · SCREEN · SK hynix · SkyWater · STMicroelectronics · Teradyne · Tokyo Electron Limited · Tokyo Seimitsu · TSMC · Western Digital

PARTICIPANT MEMBERS

Advantest · AICELLO · AirLiquide · Amazon Web Services · AMD · Amkor · Arkema · ASH Semiconductor · ASMPT Limited · Athinia · Axcelis · Bosch · Brewer Science · C2MI · Canon · CEA Leti · Cirrus Logic · Cisco · DAS Environmental Expert · Edwards · EFC Gases & Advanced Materials · Ericsson · EMD Electronics · Entegris · FUJIFILM · GlobalFoundries · Henkel · Hermes Epitek · Hitachi High-Tech · HP Inc. · IMEC · Infineon · KEPCO · Kioxia · KOKUSAI ELECTRIC · Kulicke & Soffa · Lasertec · Marvell · META · Micron · Mitsui Chemicals · MYCRONIC · NALCO · Nanya Technology · Nikon · Nordic Semiconductor · NVIDIA · NY Creates · onsemi · Ovivo · Pfeiffer Vacuum · Qualcomm · Rapidus · Renesas · Resonac · Siemens · Skanska · soitec · Sphera · SONY · SSMC · Sumitomo Chemical · Syensqo · Synopsys · Texas Instruments · Tokyo Ohka Kogyo · Tri Chemical Laboratories · Tronway · UCT · ULVAC · UTAC · VAT Group · W.L. Gore

Value Proposition

- **Collaborate** on industry value chain goals on **reducing GHG emissions**
- **Learn** how other companies in our value chain are **responding to the climate crisis**
- **Develop tools** for the entire industry value chain
- **Access a network** of peers
- Surface your pain points, **engage toward common solutions**
- Increase your **influence** through a shared consortium voice
- **Strengthen your Materiality assessment** with industry associations and value chain

Activities

Climate Impact Tools

- Evaluation of climate related risks on semiconductor value chain
- Quantification of sector impact
- Business analytics for better decision-making
- BKM for energy efficiency in manufacturing and chip tech

Reporting Standards

- Provide simplified guidelines for Scope 1, 2, 3 reporting to encourage transparency in the value chain
- Provide market intelligence to stay aligned with disclosure requirements

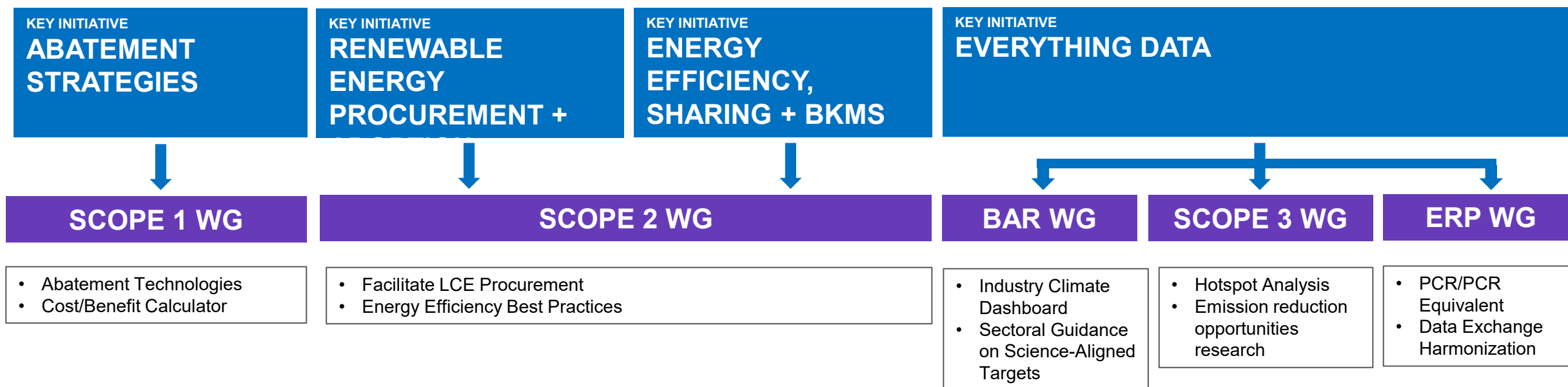
Technical Workstreams

- Demystify Scope 3 calculations & reports
- Identify infrastructure and process improvements (Scope 1 impacts)

Outreach

- Active member engagement
- Support ESG journey in our value chain
- Partner with NGOs, and local and global Communities
- Promote climate equity

2025 Key Initiatives



- 1 Sharpened Focus Areas:** Decarbonization and Transparency
- 2 Max 4 Key Initiatives at any time:** Benefits: Improve utilization of resources to deliver | Increase engagement of members with focused deliverables | Speed progress
- 3 Annual Objectives:** Built from both top-down (GC) and bottom-up (WG & Members) | Increased two-way communication



TRANSPARENCY, AMBITION AND COLLABORATION:

Advancing the Climate Agenda of the
Semiconductor Value Chain

Released: September 2023



FREE
DOWNLOAD

Our industry's first internally-produced report on our
progress and status on Climate impact

SCOPE 3 CATEGORY 1 & 11 GHG ASSESSMENTS

Guideline for the Semiconductor Sector

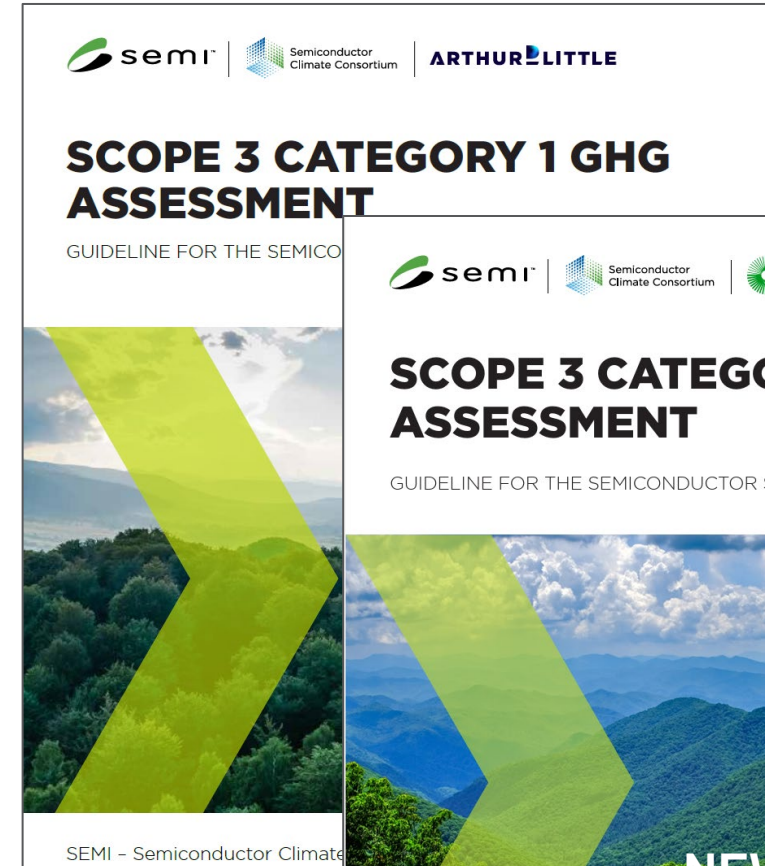
Released: January 2023 & April 2025



3.1



3.11



2025 SCC Report for Download

Scope 1: Overview of F-GHG and Nitrous Oxide Semiconductor Abatement Technologies

Released: February 2025

BAR: Digital Technology Impact on Climate

Toward a shared view of the handprint

Released: February 2025

BAR: Dashboard

Web interface

Releasing: soon

Scope 3 Category 11 Guidance

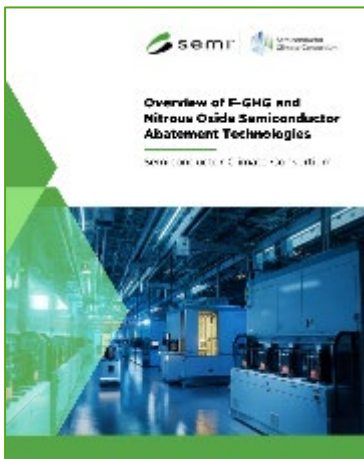
For the Semiconductor Sector

May 2025

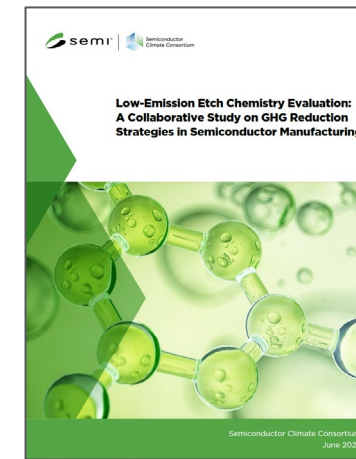
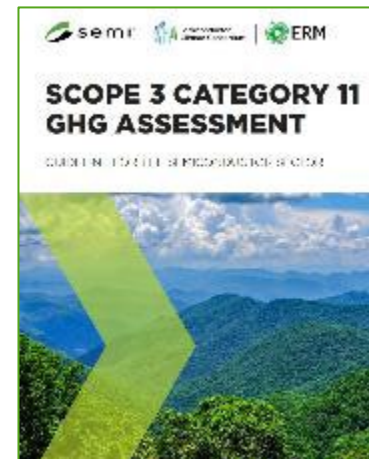
Low-Emission Etch Chemistry Evaluation

For GHG Reduction Strategies

July 2025



Member Only



Member Only – on
Connect@SEMI

Download the
public reports



2026 SCC Governing Council (Jan 2026)

Chair



Shawn Covell
Managing Director, Global
Environmental, Social and
Governance Strategy
Lam Research

Vice Chair



Fawn Bergen
Director of Sustainability
Intel Foundry



Frank Bartels
Director Global Marketing
and Product Management
BASF Semiconductor
Materials



Henri Berthe
VP Semiconductor
Segment
Schneider Electric



Bruce Gall
Strategic Partnerships
Google LLC



John Golightly
Vice President
Sustainability | Climate
| Global EHS
ASM



Elena Kocherovsky
Head of Sustainability
Strategy
Applied Materials



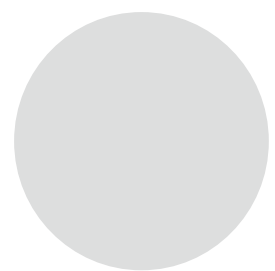
Matt Morrison
Director
Climate Strategy
Qnity



Yuji Ogino
Global Head of Sustainability
Tokyo Electron Ltd. (TEL)



Ines Sousa
Senior Sustainability
Industry Advisor
Cloud Supply Chain
Microsoft



TBD
STMicroelectronics

Engagement with Consultants and Solution-Providers

Ways to engage with the SCC if you are not in the manufacturing ecosystem

We understand the advantages of engaging with and tapping the knowledge of the many sustainability experts which exist to help our members track, report and calculate emissions.

Although there is not an official membership category for them, we do maintain a contact and distribution list to:

- Co-organize events to spotlight sustainability leadership, such as at SFCW or NYCW
 - We would be happy to plan together and support with speakers.
- Invite as SMEs on relevant solutions and best practices during Working Group meetings or other SCC/SEMI Sustainability sessions.
- Invite to participate in RfPs

Compare Membership Levels

Leadership Level	Participant Level
▪ Inaugural year fees: ○ \$40,000 SEMI Members ○ \$50,000 Non-SEMI Members ▪ Fees reassessed each year based on work plan ▪ Participate at a leadership level ▪ Shape the direction, objectives and deliverables for the group ▪ Be seen and heard as leader among customer, peer and supplier group ▪ Eligible to serve on Governing Council ▪ Eligible to Chair Working Groups ▪ Priority Access to thought-leadership and lobbying engagements ▪ Eligible to use the SCC logo on marketing and branding materials	▪ Inaugural year fees: \$15,000 ○ Fees reassessed each year based on work plan ▪ Eligible to participate in Working Groups ○ Not eligible to Chair ▪ Eligible to use the SCC logo on marketing and branding materials

The Risks of NOT Participating

- Engaging your own consultants for
 - Experimentation on replacements for high GWP gases and chemicals
 - Understanding details of Scope 3 calculations
 - Determining impactful changes to use of energy
 - Understand your goals in relation to others in the industry
 - Negative customer perceptions
 - Do not get the value of being affiliated with industry-leading, value-chain effort to reduce emissions
 - Delayed adjustments to procedures, leading to higher emissions and worse reports to stakeholders
 - Paying more for the same information others share via the SCC
 - Smaller network of problem-solvers
 - Miss easy updates to new equipment and other solutions
- Estimated >\$1 million direct consultant value and untold losses in design-wins and perceived value**



Semiconductor
Climate Consortium

Ready to Join?



How to Become a Member

1. Review the Benefits and Operations of the Semiconductor Climate Consortium as detailed in the Charter
 - SEMI Staff is available to answer questions scc@semi.org
2. Sign & Return the SCC Charter agreement to scc@semi.org

With the Agreement, please send written responses to the following questions:

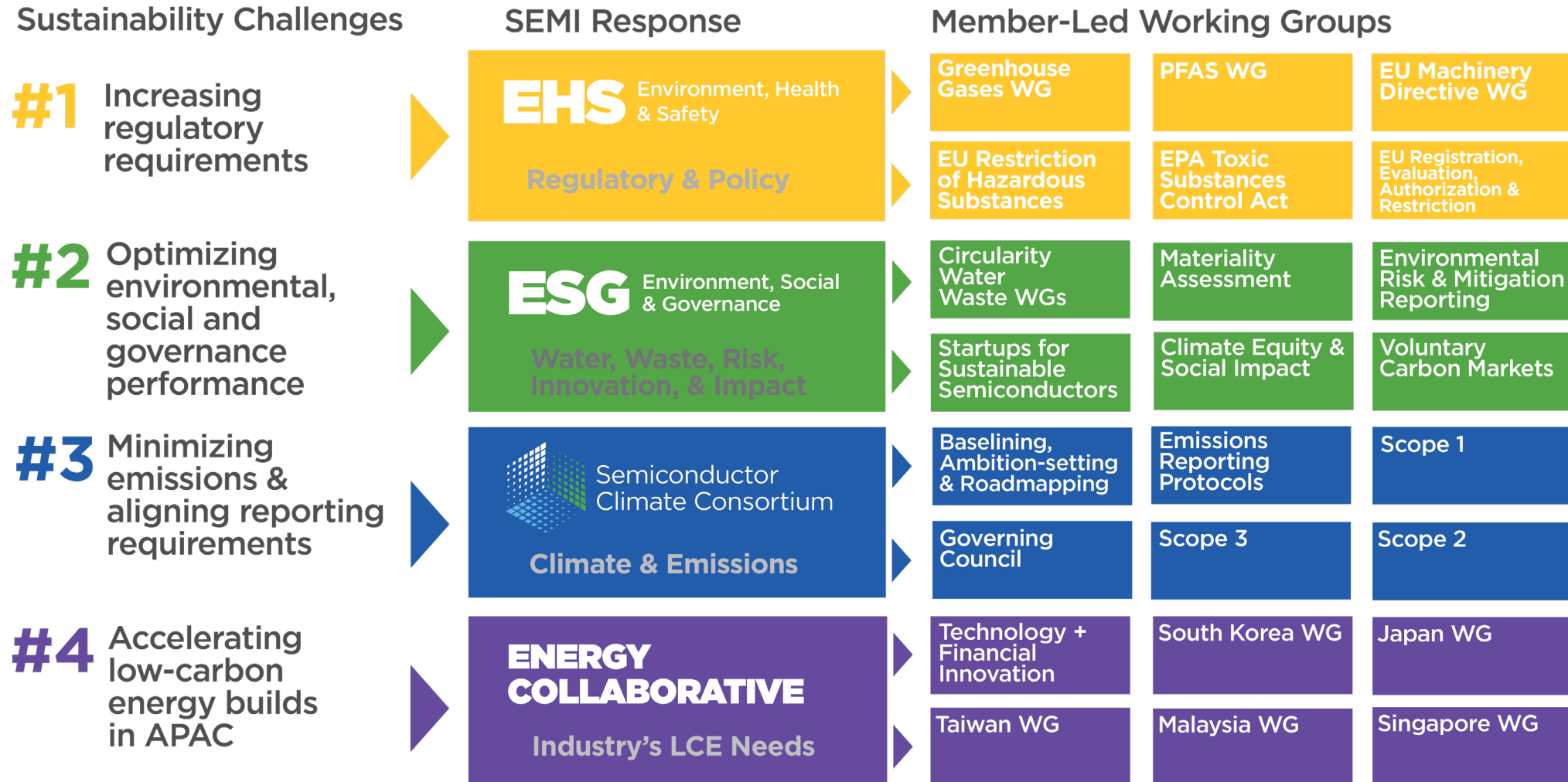
- What is your organization's position in semiconductor value chain?
 - Chemicals / wafers | Equipment manufacturer | Chip manufacturer | Engineering company | Packaging, Testing & Assembly
- Can you describe your expectations regarding SCC?
- In which working groups are you interested?
- How do you foresee your contribution in working groups and SCC?
- How would you rate your maturity level on Scope 1, Scope 2 & Scope 3?

What Happens Next

- Once we receive your signed agreement, we will
 - Contact you for Primary, Secondary and Marketing contacts and Working Group representatives.
 - Issue an invoice
- We encourage you to share on Social Media your support for the SCC [#semiconductorclimateconsortium](https://twitter.com/semiconductorclimateconsortium)

SEMI Sustainability Initiative

Overcoming Sustainability Challenges and Acting through Member Groups & Programs





ENERGY COLLABORATIVE

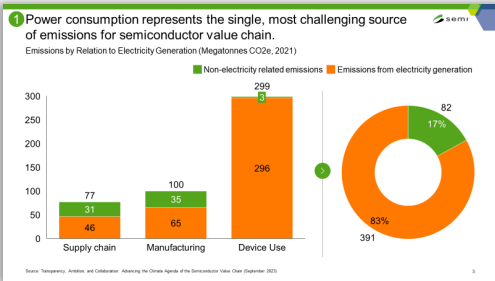
- Solving for our largest emissions challenge: access to Low Carbon Energy in APAC
- Spun off from the SCC and separately-funded
- Contact SEMI Sustainability at Energycollaborative@semi.org for more information



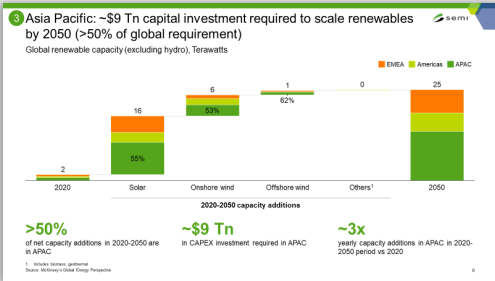
The Energy Collaborative was established to understand and clear roadblocks to scale carbon-free power sources in APAC

Power source decarbonization in APAC is high value-at-stake for the semiconductor industry

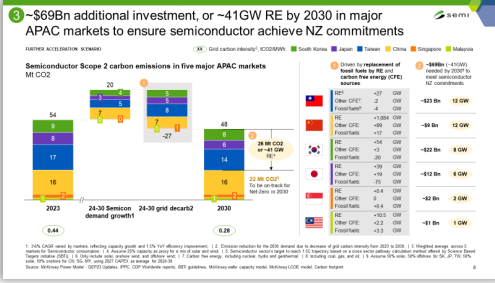
Power consumption represents 83% of total semiconductor value chain emissions



Asia Pacific make up >50% of global investment needs to scale low-carbon energy by 2050



There's a >70 bn investment or >40 GW low-carbon energy gap by 2030 in APAC to achieve semiconductor industry NZ commitments



EC was launched at COP 28 to understand and clear roadblocks to investment in low-carbon energy

Panelists and supporters at the COP28 session:

Ho Song Hwang,
VG and Head of Environment Team

Dickon Pinner, Head of Transition Capital

Janet Dietrich,
Senior Managing Director

Alex Perera,
Deputy Director



The Energy Collaborative is engaging with stakeholders across the semiconductor and low-carbon energy value chains

Sponsors

Suppliers







Fabs





Clean energy ecosystem


Downstream Customers





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Partners





Knowledge partner


EC adopts a 3-phase approach. We are in Phase 2 in Taiwan, Japan and South Korea and final stages Phase 1 for Singapore and Malaysia

Detail follows

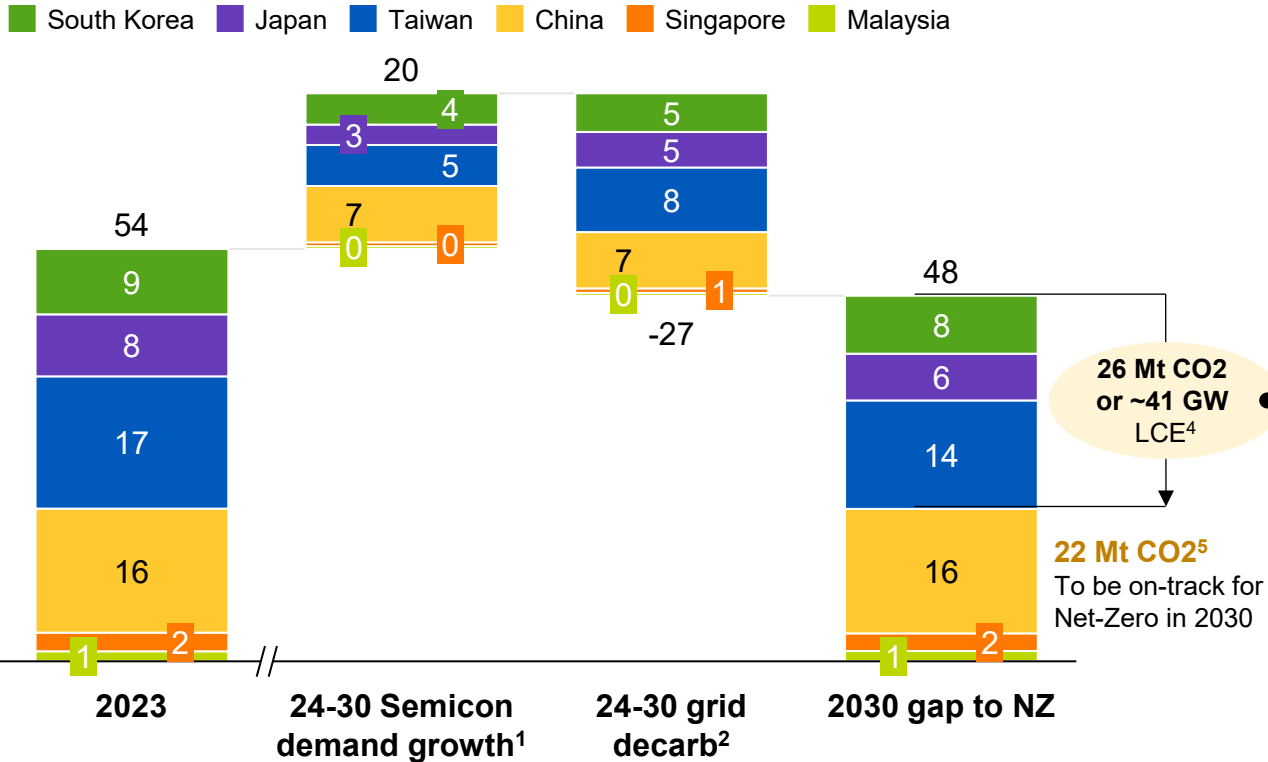
Phases	1: Direction setting	2: Stakeholder alignment and recommendation	3: Implementation
Envisioned period ¹	3-4 months	3-5 months	0.5-1.5 years
Objectives and activities	- Align on a set of challenges to address in each priority target markets - Develop a roadmap of prioritized initiatives that will help unlock the identified challenges in each market	Syndicate with the relevant stakeholders (e.g., policy makers, etc) in priority markets on findings and discuss recommendations Adjust roadmap and initiatives based on feedback	Implement prioritized initiatives - Define regular cadence to track updates and progress on each initiative until fully implemented and impact is achieved
Deliverables	Internal report on analysis and key challenges by market Long list of initiatives and documented prioritization logic Roadmap for prioritized initiatives	Revised version of - Long list of initiatives and documented prioritization logic - Roadmap for prioritized initiatives Preliminary commitment in participation in implementation Published whitepaper with key recommendations	Monthly tracking of roadmap achievement status and decarbonization impact Accelerated commitment from ecosystem stakeholders for renewable projects Finalized implementation of near-term enabler initiatives

1. Depends on the speed of alignment

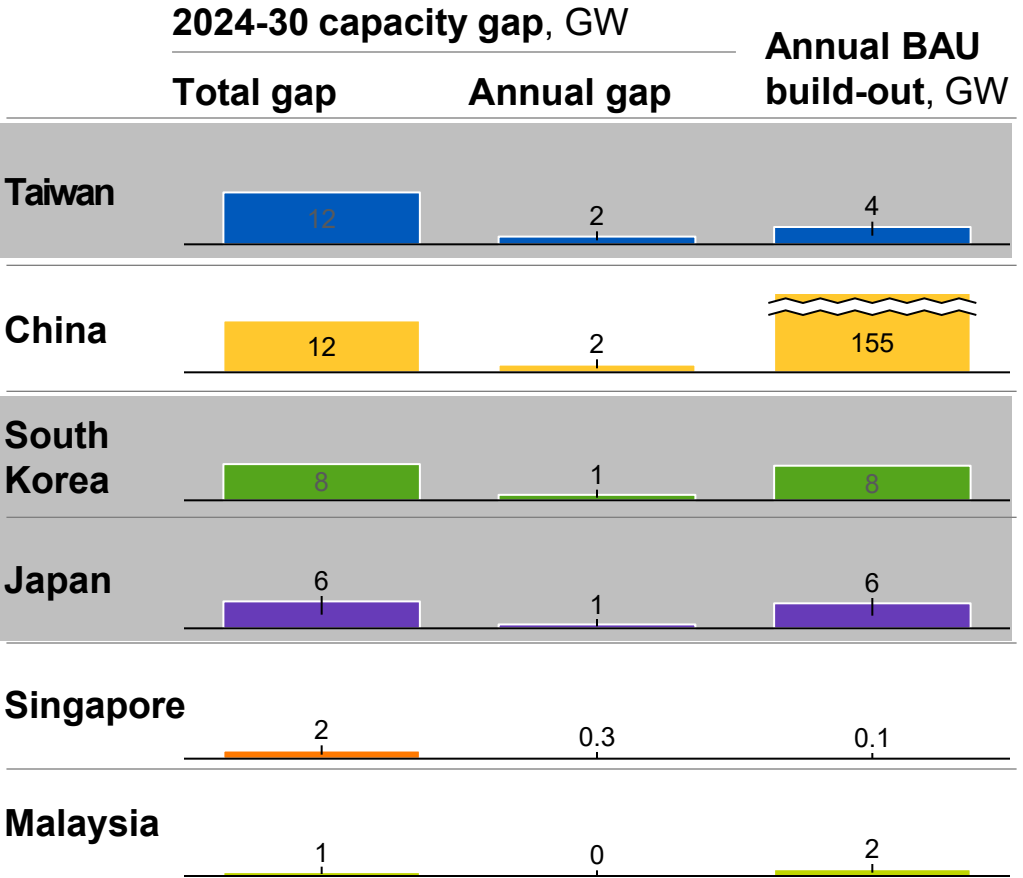
We are focusing on South Korea, Japan, and Taiwan based on size of capacity gap by 2030 and challenge to close the gap

Semiconductor Scope 2 carbon emissions in 5 major APAC markets Mt CO2

FURTHER ACCELERATION SCENARIO



Additional LCE capacity required to meet NZ by 2030, GW



1. 3-6% CAGR varied by markets, reflecting capacity growth and 1.5% YoY efficiency improvement; | 2. Emission reduction for the 2030 demand due to decrease of grid carbon intensity from 2023 to 2030; | 3. Weighted average across 5 markets for Semiconductor consumption; | 4. Assume 25% capacity as proxy for a mix of solar and wind; | 5. Semiconductor sector's target to reach 1.5C trajectory based on a cross sector pathway calculation method offered by Science Based Targets initiative (SBTi); | 6. Only include solar, onshore wind, and offshore wind; | 7. Carbon free energy, including nuclear, hydro and geothermal; | 8. Including coal, gas, and oil; | 9. Assume 50% solar, 50% offshore for SK, JP, TW; 50% solar, 50% onshore for CN, SG, MY, using 2027 CAPEX as average for 2024-30

Sponsors benefit from the Energy Collaborative (EC) in 3 aspects, which ultimately enable them to achieve energy procurement cost savings



Understanding of clean energy market regionally and globally

- **In-depth analysis** for each region anticipating **potential demand of corporate consumers** generated from insights from regional experts
- **Fact-based support on potential actions required** through review of **global best practices** and case studies
- Sharing of **estimated cost to achieve 100% LCE with different technology choices** to help sponsors make best strategic investment decisions



Joint-access and voice to create a better enabling environment

- EC organizes **policy engagement activities** with **key stakeholders** (i.e., policymakers, regulators) and **ecosystem** to jointly **voice semiconductor industry's perspective on actions required to scale clean energy access and technology adoption**
- **Regular follow-up** with stakeholders to ensure progress and understand latest direction



Opportunities to directly invest in and procure clean electrons

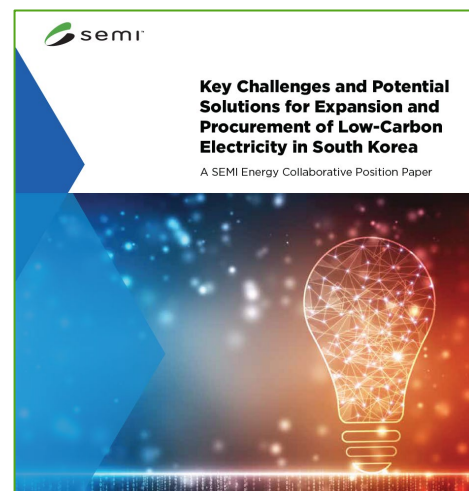
- Research and info sharing on **potential alternative procurement mechanisms** (e.g., aggregated PPA, equity investment in clean energy projects or developers, advanced market commitments)
- Discussion on **feasibility of these mechanisms** for the EC as a collaborative and EC members

Energy Collaborative LCE Market Reports



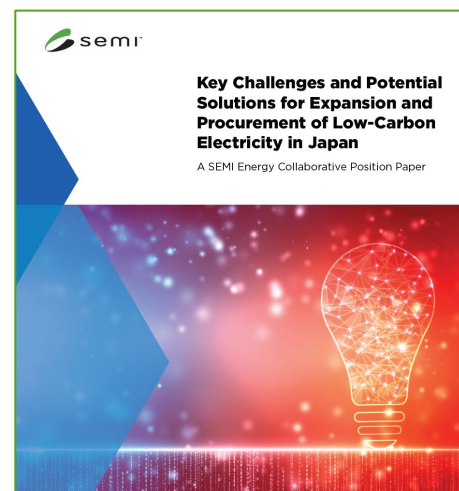
South Korea

Released: July 2024



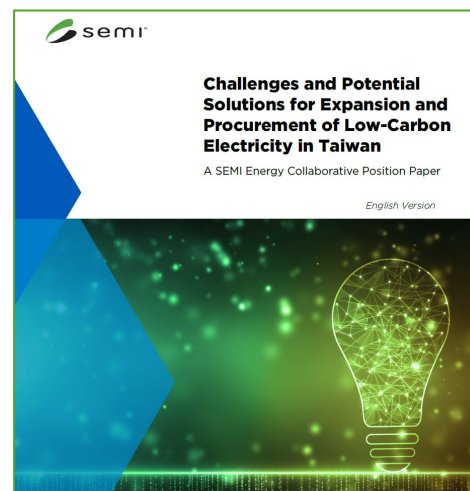
Japan

Released: August 2024



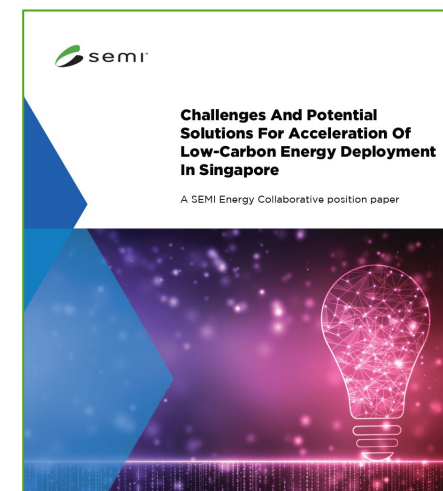
Taiwan

Released: September 2024



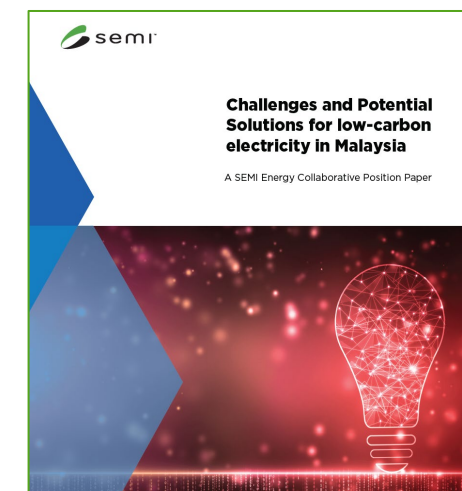
Singapore

Released: February 2025



Malaysia

Released: June 2025





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THANK YOU

[SCC Website](#)

[SCC FAQ](#)

SUSTAINABILITY