Innovating

Towards A Sustainable Future

Semiconductor
Climate Consortium

Semiconductor Climate Consortium

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Prospectus

November 2022

SUSTAINABILITY

CONNECT - COLLABORATE - INNOVATE - GROW - PROSPER

Semiconductor
Climate Consortium

The Semiconductor Climate Consortium recognizes the challenge of climate change and works to speed industry value chain efforts to reduce greenhouse gas emissions in member company operations and in other sectors of our value-chain.

We believe that member companies, with our accumulated knowledge and innovative technology, working collaboratively will accelerate solutions to address industry climate challenges. Working together, we will address and solve issues no one company can do alone.

Do you Share this Mission and Vision?

Join Us.

Why a Semiconductor Climate Consortium?

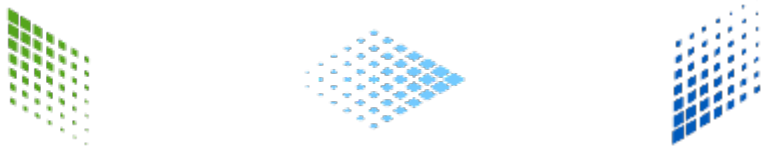
Our Shared Values

While environment and social impact have become the priorities for many industries, individual businesses are realizing that industry level collaboration is necessary to drive change with speed and scalability.

Members of the Semiconductor Climate Consortium recognize the challenge of climate change and the role our industry can play in reducing greenhouse gas emissions, in our own operations, our value chain, and other industries through the technologies we enable.

We believe member companies with accumulated knowledge and innovative technologies, working collaboratively, will accelerate the efforts toward solving environmental challenges which cannot be addressed by any company alone.

Members agree to support the Paris Agreement and related accords driving the 1.5°C pathway and are aligned on the need to drive climate progress within our industry.



We welcome companies in the semiconductor ecosystem companies 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 Membership Agreement
GHG = Green House Gas

Semiconductor Climate Consortium

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. Modeled after the success of the Fashion Pact, we will 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.

Members and non-members are invited from the entire semiconductor ecosystem

The entire SEMI ecosystem is invited to join and align sustainability efforts to the Semiconductor Climate Consortium

Logos and names used for illustrative purposes only. Usage does not signify endorsement from listed companies.

Founding Members of the SCC

As of Nov. 1, 2022

Advantest • AICELLO • AMD • ams OSRAM Group • Analog Devices • Applied Materials
Arkema • ASE • ASM • ASML • ASMPT •Athinia™ • Axcelis • Brewer Science
DAS Environment Expert • Donjin Semichem • DuPont • EBARA • Edwards • Entegris
GlobalFoundries • GlobalWafers • Google • Hermes Epitek • Hitachi High-Tech • imec
Intel Corporation • JSR • KLA • KOKUSAI ELECTRIC • Kulicke & Soffa • Lam Research • Lasertec
Longi • Marvell • Micron • Microsoft • Monument Chemical • MYCRONIC • Nanya Technology • Nikon
NXP • onsemi • Ovivo • Pfeiffer Vacuum • Plexus Corp. • Samsung Electronics •
Schneider Electric • SCREEN • Showa Denko Materials • SK hynix • SkyWater • Sphera
STMicroelectronics • Sumitomo Chemical • Tokyo Electron Limited • Tokyo Ohka Kogyo
Tokyo Seimitsu •Tri Chemical Laboratories • TSMC • UCT • ULVAC
UTAC • VAT Group • Western Digital

Outreach and Engagement

The SCC is reaching out to many other organizations that share climate change ambitions and exploring engagement opportunities, including:

- **Semiconductor Industry Association (SIA)** – regular communication to complement each other's efforts
- **McKinsey & Co.** – SCC knowledge partner in formation and certain deliverables
- **SBTi** – The SBTi defines and promotes best practice in science-based target setting
  - We wish to include semiconductor value chain sector in their database
- **Climate Equity Consortium** – climate justice and climate equity initiatives
- **UNFCC** – The United Nations Framework Convention on Climate Change established an international environmental treaty to combat "dangerous human interference with the climate system", in part by stabilizing greenhouse gas concentrations in the atmosphere
  - **COP27** – The SCC will announce its formation and highlight the steps the industry has pledged to support the Paris Agreement at COP27
- **WEF** – The World Economic Forum is an independent international organization committed to improving the state of the world by engaging business
- **WEI** – The Women's Environmental Institute is an environmental research, renewal and retreat center designed to create and share knowledge

Benefits

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

Activities

Climate Impact Tools

- Evaluation of climate related risks on semiconductor value chain
- Quantification of semiconductor sector impact
- Business analytics for better decision-making
- Energy Coalition

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)
- Support start-ups and innovation

Outreach

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

Proposed Deliverables*

Fast-Start Activities

- Create and use guidelines to standardize reporting for Scope 1, 2, 3 in the value chain
- Establish Business Analytics for semiconductor carbon footprint and renewable energy roadmap in the value chain
- Evaluation of climate related risks on semiconductor value chain
- Outreach: Engage with UNFCC, WEF, SBTi, WRI (and others) to raise their awareness of the semiconductor sector value chain. Evaluate opportunities to promote climate equity
- Collective responses to regulatory requirements Sharing of available resources on incentives, taxes and disclosure

Second Priority Activities

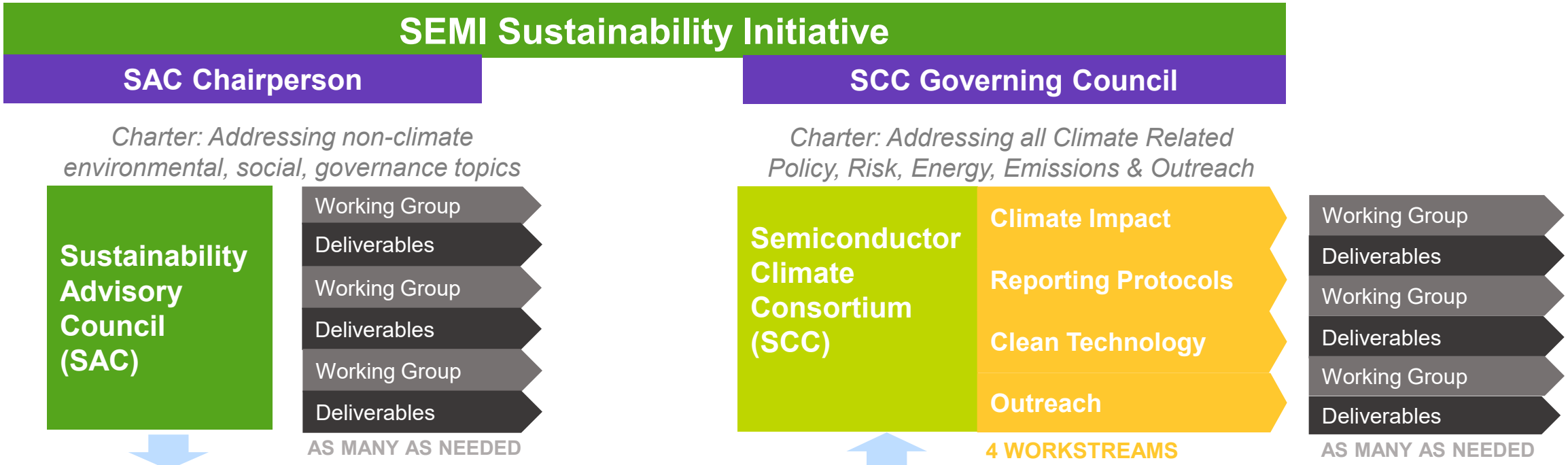
- Access the Innovators: 1) provide a funnel for Clean Tech startups to members (S3); 2) Generate playbook for startups' proof of concept
- Fund and guide the development of Market Intelligence and Resource for SCC members
- Collaborate with SEMI Smart Manufacturing for sustainability solutions in manufacturing. Examples:
  1) Provide a platform for manufacturing efficiencies with real time decision making; or
  2) Expedite development and deployment of smart communication between equipment
- Create a collection of best practices and solutions
- Formalize industry responses to government policy groups & advocacy activities: regional clean energy access; regulatory policy mtgs; disclosure, carbon tax, incentives, taxonomy

Third Priority Activities

- Expand to include Energy Group to accelerate the accessibility for renewables, low-carbon energy, sharing of local resources, providers, developers in the value chain
- Develop and deploy predictive Climate Risk assessments calculator and impact on semiconductor value chain
- Deploy predictive analytics and reports against roadmap to 2030 & 2050
- Annual reporting on overall semiconductor value chain climate performance
- Reach beyond our sector to help solution sustainability issues in other industry
- Support pre-competitive research for discovery and deployment of alternate gases for our current high GWP GHGs

*Note: Actual objectives, deliverables, timelines and final priorities to be determined by the Consortium Leadership Level members in Q1 2023

The SCC Operates Complementarily with the SEMI Sustainability Advisory Council (SAC)



1. SAC continues to be the overarching ESG forum
2. SCC will provide monthly updates to the SAC audience similar to all the other WG updates
3. SAC to organize a bi-annual or annual summit for information exchange and annual planning across the ESG platform for leaders of WG, SCC Council, SAC Leadership
4. SEMI Sustainability initiatives are Global and SEMI will strive to create an environment that is all inclusive

SCC Structure & Governance

SEMI SCC Consortium Management

- Dedicated Consortium Manager
- WG & Project Support, Legal support mgmt.
- Communications and marketing
- G&A Support

SCC Governing Council

- 7 members from different segments of the semiconductor ecosystem
- Annual nominations/elections from Leadership Level Members
- Governing Council chooses Chair & Co-Chair
- Defines Agenda, Objectives, Support for Working Groups

Members

- Multiple POCs at any company
- Populate Working Groups
- Leadership level members nominate and vote for GC members
- Participant Level eligible to engage on Working Groups

Climate Impact

Reporting Protocols

Clean Technology

Outreach

4 WORKSTREAMS

Working Group
Deliverables
Working Group
Deliverables
Working Group
Deliverables
Working Group
Deliverables
Working Group
Deliverables

AS MANY AS NEEDED

Plan for Globally Inclusivity

Both SAC and SCC are committed to being inclusive of our global membership and value chain. We are working on a model to engage our respective membership. Depending on membership numbers in each, we envision a 2-step process for the Governing Council(s) to adopt in 2023:

Step 1: 100% Sync Across the world

- Working Groups host 2 meetings with 1 bridging person
- Recorded viewing in other regions
- Odd months – Asia friendly; Even – US friendly; EU join friendly time zone

Step 2: Global Governance; Local Management

- Setup 3 Continents (US, EU, Asia)
- Host Local WG meetings
- Reconvene monthly through SAC
- Manage through regional consortium managers
- Membership in other region meetings is optional

SCC Proposed Working Groups

1. **Climate Consortium Formation** – Led by ASM International-John Golightly, SEMI-Mousumi Bhat
2. **Baselining, Ambition Setting and Road mapping** – Led by ASML-Marijn Vervoorn (Origin of SCC Mission, Vision, Structure)
3. **Value Chain GHG Scope 1 – Reporting Protocols** – Led by EMD Electronics-Mary Majors and Schneider Electric-Gregg Morasca
4. **Value Chain GHG Scope 2 – Reporting Protocols** – Led by and EMD Electronics-Mary Majors and Schneider Electric-Gregg Morasca
5. **GHG Scope 3** – Led by Intel-James Larsen; Applied Materials-Elena Kocherovsky
6. **Component Sustainability Scoring** – Led by Applied Materials-Ben Gross
7. **Scope 1 High GWP GHG** – Led by SEMI-Mousumi Bhat
8. **Semiconductor Sustainability Startups** – Led by M Ventures (EMD Electronics)-Sarah Luppino
9. **Outreach/Inclusion** – Leader TBD – SCC WG partnership with SEMI to build engagements, partnerships, advocacy strategy

Deliverables & Tasks

- The work is driven and led by Working Groups composed of Member Representatives
- SCC tasks are executed by a combination of staff, consultants, and company personnel, as appropriate

*Note: Actual workstream assignments, objectives, deliverables, timelines and final priorities to be determined by the Consortium Leadership Level Members and SAC in Q1 2023

Compare Membership Levels

Leadership Level

- Inaugural year fees:
  - $40,000 SEMI Members
  - $50,000 Non-SEMI Members
- Fees reassessed each year based on work plan
- Eligible to vote for Governing Council members
- Eligible to serve on Governing Council
  - Determine objectives, deliverables and recommend spend
- Eligible to Chair Working Groups
- Priority Access to thought-leadership and lobbying engagements
- Eligible to use the SCC logo on marketing and branding materials

Participant Level

- 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

Branding & Marketing

Semiconductor Climate Consortium members align with this important Sustainability effort, including authorized usage of the logo. Usage provides visually appealing recognition for your efforts to address impact on the world's climate and support for innovative approaches to reducing GHG and the impact of climate change.

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Join the Semiconductor Climate Consortium today.
Ask me how.

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powered by semi

Email Signature Line – link to https://www.semi.org/en/industry-groups/sustainability-climate-consortium

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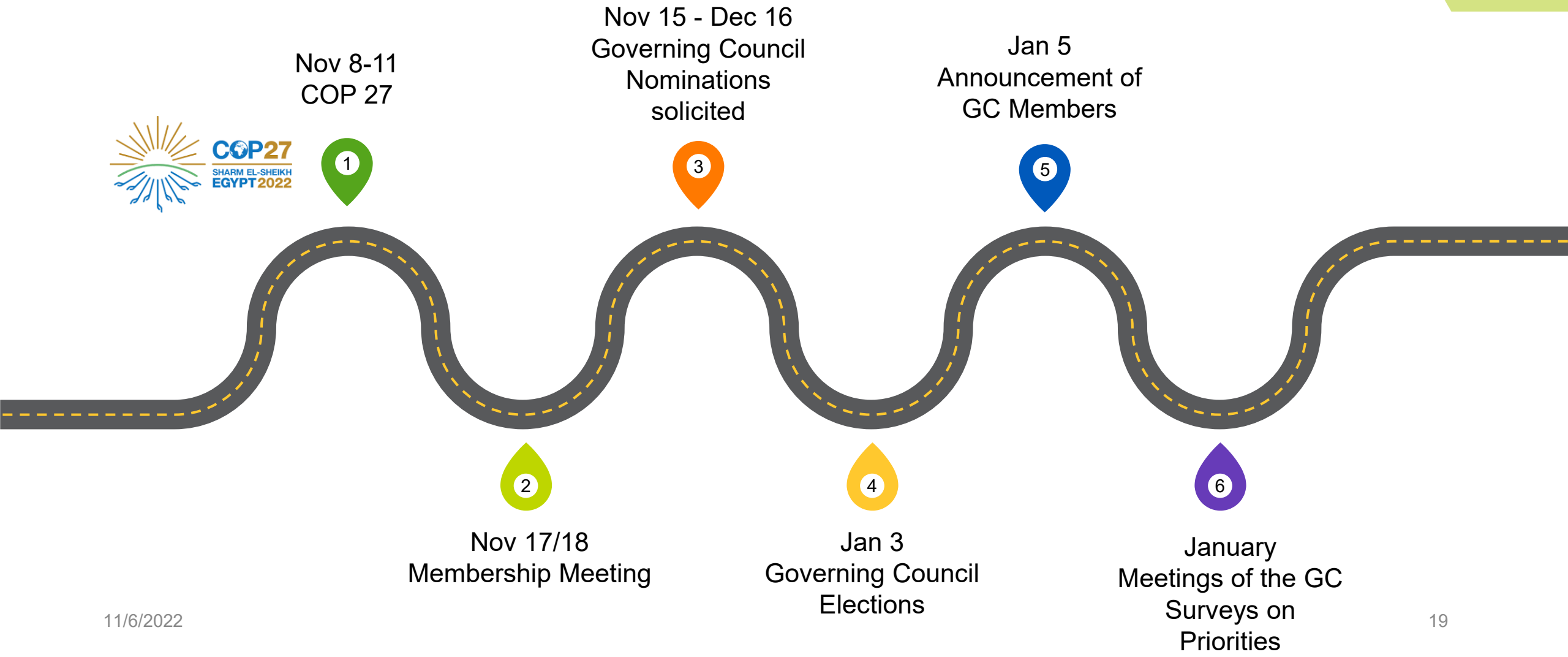
Ready to Join?

Timeline through November - January



How to Become a Member

1. Review the Benefits and Operations of the Semiconductor Climate Consortium as detailed in the Agreement
   - Hold meetings as necessary with SEMI Staff (or SCC Member) to discuss engagement
2. Sign & Return the Agreement to Aditi Gowda at scc@semi.org

What Happens Next

- Establish primary contact and points of contact for Working Group activity
- Share on Social Media your support for the SCC (optional)

Semiconductor
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Become a **Member** by returning a completed agreement.

Download the Agreement

THANK YOU

SCC Website

SCC FAQ

SUSTAINABILITY