FUTURE ENERGY
WEEK

# Experience the power of collaboration

16-21 November 2021

Tonsley Innovation District, South Australia



# Introduction

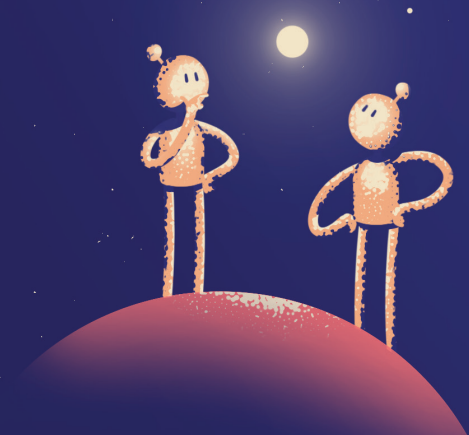
Future Energy Week is brought to you by the Tonsley Future Energy Consortium and is hosted at the Tonsley Innovation District, South Australia.

This series of events will showcase the best and brightest in energy and connect organisations with current and emerging innovators who contribute to the much-needed clean energy transition.

The Tonsley Energy Consortium was founded in 2018 by Quentin Roberts (EfficientSee) to realise a vision of strong collaboration between current tenants and solution providers in energy.

The group of founding members that included Zen Energy, SAGE Automation, CleanPeak Energy, AZZO and EfficientSee has since grown to include the City of Marion, Flinders NVI, TAFE SA, Tesla, Danfoss, Rockwell Automation, Siemens Energy and Phoenix Contact. This dynamic group represents a unique model of collaboration that is the way of the future.

Through this collective, the Tonsley Innovation District is becoming recognised as Australia's Future Energy Hub and is known for many 'firsts', including Australia's largest rooftop solar array and Hydrogen electrolyser.



# Aspirations

## Collaborate

**verb**

*col·lab·o·rate* | \ kə-ˈla-bə-ˌrāt \

1. To encourage and demonstrate the power of collaboration.

## Educate

**verb**

*ed·u·cate* | \ ˈe-jə-ˌkāt \

1. To equip those facing the challenges of Australia's energy transition.

## Elevate

**verb**

*el·e·vate* | \ ˈe-lə-ˌvāt \

1. To highlight the precinct, region and state as global energy leaders and problem solvers.

# Value Proposition

Providing answers to domestic and international energy challenges;

Combined capability in supplying, selecting, developing, integrating and deploying energy solutions;

One-stop-shop benefit for customers without losing the advantages of specialisation;

Establish working relationships; and

Drive innovation in energy solutions.

# Key Benefits

Global positioning, promotion and branding for South Australia and the Tonsley Innovation District – for energy resource innovation and management;

Establishment of an entry point for accessing novel technologies, services, training, research;

The provision of office space and facilities for start-up businesses and innovators;

Opportunity to improve collaboration across the state

A mechanism to create links between Government, industry and research;

Providing a link to training and access to talent from universities across Australia (students, academics, researchers);

A catalyst for innovation using nascent technologies or business models; and

Illuminate the innovation and research pathways with academia.

# Partners



## Founding Partner

efficientsee®

## Event Sponsors

PHOENIX CONTACT
SAGE
CORE
AZZO technology comes together®
CleanPeak ENERGY

## District Partner

Tonsley Innovation District

## Environmental and Social Partners

Trees ForLife
MarionLIFE

## Facilitation Partners

CITY OF MARION
Flinders UNIVERSITY
NEW VENTURE INSTITUTE
WORLD ENERGY COUNCIL

## Collaboration Partners

Danfoss
TESLA
Rockwell Automation
tafeSA
Government of South Australia
SIEMENS energy

## Delivery Partners and Sponsors

fixe
Ethical Fields
Resilient South
COMMITTEE FOR ADELAIDE
SA H2H Hydrogen Technology Cluster
Government of South Australia
Department for Energy and Mining
EY
SOUTHERN BUSINESS MENTORING PROGRAM

# Featured Speakers



### Dr. Angela Wilkinson
**Secretary General & CEO**
World Energy Council



### Dr. Ariella Helfgott
**Director of Scenarios**
World Energy Council



### John Azzollini
**Founder, Chief Operating Officer (COO)**
AZZO Group



### Philip Graham
**Founder**
CleanPeak Energy



### Prof. Will Steffen
**Councillor**
Climate Council



### Paul Moore
**Head of Energy**
SAGE Group



### Prof. Gus Nathan
**Director**
Centre for Energy Technology



### Richard Day
**Director of Strategy, Policy and Communications**
Department of Energy and Mining SA



### Prof. Caroline McMillen
**Chief Scientist**
South Australia



### Prof. Mats Andersson
**Director**
Flinders Institute for Nanoscale Science and Technology



### Andrew Nunn
**Chief Entrepreneur**
South Australia



### Ian Overton
**Chief Executive**
Green Industries SA



### Moira Were AM
**Cultivator**
Ethical Fields



### Kristin Raman
**Head of Strategy and Innovation**
AGIG



### Quentin Roberts
**Founder,** EfficientSee, Tonsley Future Energy Consortium
**Co-founder,** SA-H2H™



### Nicholas Mumford
**Managing Director**
Mumford Commercial Consulting
**Co-founder**, SA-H2H™



### Miranda Taylor
**CEO**
NERA



### Prof. Volker Hessel
**Deputy Dean (Research)**
University of Adelaide



### Fiona Simon
**CEO**
Australian Hydrogen Council



### Attilio Pigneri
**CEO**
H2U - the Hydrogen Utility™



### Jenny Paradiso
**Managing Director**
Suntrix



### Kris Hanna
**Mayor**
City of Marion

# Featured Speakers



## Leonie Muldoon
**Chief Executive**
South Australian Government, Department for Trade and Investment



## Dr. Rüdiger Meyer
**Application Expert Energy Storage for the Business Area Device Connectors**
Phoenix Contact



## Trish White AM
**Interim CEO**
HILT CRC



## Rex Patrick
**Senator**
South Australia



## Aaron Yew
**Co-Founder**
Oxamii



## Marco Salinas
**Hubble**
Co-Founder & CEO



## Matthew Stead
**Ping Services**
Founder & CEO



## Senator Penny Wong
**Senator** for South Australia
**Leader** of the Opposition in the Senate
**Shadow Minister** for Foreign Affairs



## Russell James
**General Manager**
Hydrogen and Future Fuelds at ATCO Australia



## Tony Chappel
**Chief External Affairs Officer**
Australian Energy Market Operator (AEMO)



## Rob Morris
**Co-Founder & CEO**
iO Energy



## Rachelle Cooper
**PMO Manager**
Growth and Low Carbon Division, Dept. for Energy and Mining, South Australia



## Malcolm Leask
**Director**
Hither & Yon



## Dominic Churchill
**Head of Capital Markets**
Smart Capital Group



## Brett Murphy
**Relationship Manager**
Tesla



## Leon Cermak
**Community Relationship Partner**
Tesla



## Craig Durrheim
**Business Development Manager**
Danfoss, SA/NT



## Jason Carcatsis
**Tonsley Operations Engineer**
CleanPeak Energy



## Hon. Stephen Patterson
**Minister for Trade and Investment**
Government of South Australia

# Key Educational Themes

Future Energy Week will cover the important horizons of:



## Energy Now

The current state of play – hear what energy leaders around the world have to say.



## Energy Next

Smart modelling around inclusive energy generation, and consumption.



## Energy Future

Building resilient and sustainable futures with innovation.

## Target Audience

The key audience is every business operation in South Australia that wish to understand the challenges and opportunities to participate in a clean economy. Given the two education pillars of TAFE SA and Flinders University, students and researchers will also be targeted to help industry and government with innovation and research collaborations.

# Program

## Tuesday 16th November 2021

Energy Now | Lecture Theatre 1 Flinders Tonsley

**0830 Registrations / Networking**

**0900 Welcome**
From City of Marion, Flinders University and World Energy Council

**0920 Welcome from the Event Director**
The Power of Collaboration
Quentin Roberts – Founder, EfficientSee & Co-founder, Tonsley Future Energy Consortium and SA-H2H™

**0930 Keynote**
South Australia's Energy Transition
Richard Day – Director Strategy, Policy and Communications, Department for Energy and Mining SA

**1000 Keynote**
Climate Change 2021 : Why we are facing an emergency
Prof. Will Steffen – Councillor, Climate Council

**1030 Morning Tea / Networking**
Phoenix Contact

**1100 Case Study Session**
Enabling the SA Water Zero Cost Energy Future Project
Paul Moore – Head of Energy, SAGE Group

**1130 Case Study Session**
Enabling SA Produce Market's Leading Edge Energy Microgrid Microgrid Project
John Azzollini – Founder and Chief Operating Officer (COO), AZZO Group

**1200 Case Study Session**
Australia's Largest Rooftop array and the future of District Energy
Philip Graham – Founder, CleanPeak Energy

**1230 Lunch / Networking**
CORE Innovation Hub Delegate Lunch

**1330 Tonsley Tours**

**1430 Energy Jargon Buster Session**
Your energy questions answered. A range of topics will be covered by our experts including:

Panelists:
- Paul Moore – Head of Energy, SAGE Group
- Quentin Roberts – Founder, EfficientSee & Co-founder, SA-H2H™, Tonsley Future Energy Consortium
- John Azzollini – Founder, Chief Operating Officer (COO), AZZO Group
- Jason Carcatsis – Tonsley Operations Engineer, CleanPeak Energy
- Craig Durrheim – Business Development Manager, Danfoss SA/NT
- Brett Murphy – Relationship Manager, Tesla

**1530 Keynote**
The All-Electric Society
Dr. Rüdiger Meyer – Application Expert Energy Storage for the Business Area Device Connectors, Phoenix Contact

**1600 Keynote**
How does Australia compare to the rest of the world in its energy transition?
Dr. Angela Wilkinson – Secretary General and CEO, World Energy Council

**1700 Drinks & Nibbles / Networking**
CleanPeak Energy

# Program

## Wednesday 17th November 2021

Energy Next | Lecture Theatre 1 + 2 Flinders Tonsley

**0815 Registrations / Networking**
Tonsley POD - MAB C9

**0840 Welcome**
From Resilient South and City of Marion
Kris Hanna – Mayor, City of Marion

**0900 Business and Climate Change Breakfast**

**Keynotes**

Business continuity under climate change
- Dominic Churchill – Head of Capital Markets, Smart Capital Group
- Malcolm Leask – Director, Hither and Yon
- Senator the Hon Rex Patrick – Senator for South Australia
- The Hon Stephen Patterson MP – South Australian Minister for Trade and Investment
- Senator the Hon Penny Wong – Senator for South Australia

**Panel Discussion**

Business continuity under climate change
- Outcomes from the recent COP26 Climate Change Conference
- Climate risks to businesses
- Opportunities for businesses
- Emerging economic issues
- Meeting southern Adelaide's energy needs (including electricity, transport, etc)
- Sustainable industries in southern Adelaide, including case studies of sustainable business operations
- Reconciling state and federal policy with the needs of southern Adelaide

Panelists:
- Dominic Churchill – Head of Capital Markets, Smart Capital Group
- Malcolm Leask – Director, Hither and Yon
- Senator the Hon Rex Patrick – Senator for South Australia
- Fairlie Delbridge – Managing Director, Cminus
- Kat Heinrich – Director and Associate Consultant, Rawtec

**1000 Morning Tea / Networking**
Southern Business Mentoring Program

**1100 Welcome**
From Committee for Adelaide

**1115 Panel Discussion**
Plugging the digital tech skills gap

- The rapid growth of the renewable energy sector in South Australia needs to be supported by a skilled and talented workforce with hi-tech digital technology capabilities.
- Business investment and attraction is dependent on our ability to provide a pipeline of talent to accelerate growth.
- This session will look at how we can improve coordination to plug the digital tech skills gap and enable businesses to thrive.

Facilitator:
- Penny Gale – Former Committee for Adelaide Deputy Chair

Panelists:
- Geneéne Kleppe – CEO, Digital Twinning Australia
- Tom Pennington – Director of Technology, Price Waterhouse Coopers
- Laura Mabikafola – General Manager Skills Lab, Sage Automation
- Helen Connolly – Commissioner for Children and Young People

**1230 Lunch / Networking**

**Welcome**
From Ethical Fields and World Energy Council

**1330 Round Table Session**
Community Ownership Models

Facilitator:
- Moira Were – Cultivator at Ethical Fields

Panelists:
- Leon Cermak – Community Relationship Partner, Tesla
- Phil Donaldson – Executive Leader, BioRegional Australia
- Moira Were – Cultivator, Ethical Fields
- Gareth Priday – Co-Founder, Participatory Futures Global Swarm
- Rachel Brdanovic – CEO and Sustainability Consultant, Tandem Energy

**1500 Panel Session**
Future Energy Scenarios

Panelists:
- Dr Ariella Helfgott – Director of Scenarios, World Energy Council
- Tony Chappel – Chief External Affairs Officer, Australian Energy Market Operator (AEMO)
- Rachelle Cooper – PMO Manager, Growth and Low Carbon Division, Department for Energy and Mining, SA

# Program

## Thursday 18th November 2021

Energy Next | Drillcore Reference Library

**0830 Registrations / Networking**

**0900 Welcome**
From SA-H2H™ Hydrogen Technology Cluster

**0910 Keynote**
Collaboration opportunities to enable South Australia to become a leading clean hydrogen producer in the future
Leonie Muldoon – Chief Executive, South Australian Government, Department for Trade and Investment

**0930 Keynote**
Unlocking Australia's hydrogen opportunity
Fiona Simon – CEO, Australian Hydrogen Council

**1000 Keynote**
Collaborating to strengthen Australia's energy future and Hydrogen's critical role
Miranda Taylor – CEO, National Energy Resources Australia (NERA)

**1030 Morning Tea / Networking**
Ernst & Young Morning Tea

**1100 Project Experiences and Perspectives**
Hydrogen Park South Australia
Kristin Raman – Head of Strategy and Innovation, Australian Gas Infrastructure Group (AGIG)

Eyre Peninsula Gateway™ project
Attilio Pigneri – CEO, H2U - the Hydrogen Utility™

**1130 Hydrogen Skills Symposium**
Plugging the Hydrogen skills gap

Speakers:
- Lynette Day – Manager of Strategic Projects, Hydrogen, Department for Energy and Mining, South Australia
- Penny Johnston – Acting Executive Director, Academic Development at TAFE SA

**1230 Lunch / Networking**
Ernst & Young Lunch

**1300 Hydrogen Refuelling Study Presentation**

Speakers:
- Saindhav Tamhane – Principal Industry Development Officer Hydrogen, Growth and Low Carbon Division Department for Energy and Mining
- Dean Williams – Commercial Lead, GPA Engineering

**1400 SA-H2H™ Member Showcase**
Showcasing leading organisations in the Hydrogen Supply Chain

Speakers:
- Chris Dolman – Business Development Manager, Clean Hydrogen at BOC South Pacific
- Russell James - General Manager Hydrogen and Future Fuels, ATCO Australia
- Roger van der Lee – Chief Executive Officer, HYDI Hydrogen
- Stephen Bussenschutt – Technical Director, Vibe Energy
- Anthony Coles – Business Development Manager, LAVO™

**1500 Hydrogen Industry Networking**

**1500 Electrolyser Tours**
(SA-H2H™ Members Only)

# Program

**Friday 19th November 2021**
Energy Future | Lecture Theatre 2 Flinders Tonsley



**0830 Registrations / Networking**

**0900 Welcome**
From Flinders NVI and SA Chief Scientist

**0910 Panel Session 1**
Innovation in Energy

Facilitator:
- Prof. Caroline McMillan – SA Chief Scientist

Panelists:
- Dr Ian Overton – Chief Executive, Green Industries SA
- Andrew Nunn – SA Chief Entrepreneur
- Jenny Paradiso – Managing Director, Suntrix
- Richard Turner – Assoc. Prof., Uni SA, Premiers Climate Change Council

**1000 Break**

**1015 Panel Session 2**
Science and Technology Research in Energy

Facilitator:
- Dr Ariella Helfgott – Director of Scenarios World Energy Council

Panelists:
- Prof. Gus Nathan – Director, Uni of Adelaide Centre for Energy Technology
- Prof. Volker Hessel – ECMS Deputy Dean - Research, Uni of Adelaide, School of Chemical Engineering and Advanced Materials
- Prof. Mats Anderssen – Flinders University, Director Institute for Nanoscale Science and Technology

**1115 Break**

**1130 Start-up Showcase**
Energy Innovation in Action

Facilitator:
- Verity Kingsmill - Acting Director, Flinders NVI

Startup Pitches:
- Aaron Yew – CEO, Oxamii
- Marco Salinas – CEO, Hubble
- Rob Morris – CEO, IO Energy
- Matthew Stead – CEO, PING Technology
- Dean McGurgan – Founder, EcoVent
- Nithesh Pushparaj – CEO, TAV Systems

**1220 South Australian Government support for Start-ups and Entrepreneurs**

The role of our office and the FIXE Strategy, Research and Innovation Fund including Seed-Start Grants, Go2Gov, FIXE Scholarship and Boardroom Lunch Series.

Facilitator:
- Dr Judy Halliday – Chief Operating Officer, Office of the SA Chief Entrepreneuril

**1230 Lunch / Networking**
Futures Industries Exchange for Entrepreneurship (FIXE)

**1330 Transformathon Registration**

**1400 Transformathon Opening**
Accelerating Australia's energy transformation.
- Angela Wilkinson – Secretary. General of WEC
- Liz Gillies – CEO, Menzies Foundation

**1430 Transformathon**

Provocations:
- The Energy-Water-Food-Wine Transition
- Community Ownership
- Maintaining a stable resilient grid – that meets SA needs, while we export, in the face of changing consumer behaviour and preferences
- The role of Hydrogen is SAs future
- Energy Transition Leadership in Australia
- Decarbonising Heavy Industry
- Demand side management strategies
- Energy Transition Life Cycle and the Waste Streams of the Future

Hosts:
- Bert Verhoeven – Program Director of Innovation and Enterprise, Flinders University
- Angela Di Fabio – Business Development & Engagement, Flinders New Venture Institute
- Dr. Ariella Helfgott – Director of Scenarios, World Energy Council

**1530 Break**

**1545 Briefing**

**1600 Teams Formation**

**1630 Project Scoping**

**1715 Break**

**1730 System Mapping**

# Program

Saturday 20th - Sunday 21st November 2021
Energy Future

## Transformathon

The Transformathon is the action phase of Future Energy Week. It is where teams get together around key energy challenges, and are supported through a facilitated process, to rapidly generate interventions that will accelerate energy transition here in South Australia. The process integrates interactive scenario planning, game design and lean innovation.

---

Energy hackathons have grown to become collaborative events that bring together people from a range of backgrounds who work together to create new, or workshop existing, innovative ideas and solutions to the challenges facing the clean energy industry.

Games are one of the most powerful and widespread ways that human beings interact, communicate, and have fun. Using the features of games to accomplish a real-world objective—is called gamification. Over the past five years or so, businesses, non-profits, and governments have gamified a wide array of activities to encourage positive behaviour change. This event brings these two processes together and will be a South Australian first and we are coining a new term 'Transformathon'.

The events runs over three days that focus on one topic, problem or challenge for which participants explore and develop a solution. High-quality mentors provide input into the ideas that the teams are developing over the course of the weekend.

Participants are either put in a themed teams to workshop a game, business model and solution based on a given topic. The teams are given access to a wide range of mentors, with a wealth of knowledge and skill sets, who can provide advice, knowledge and feedback throughout the experience.

At the end of the weekend the ideas are then pitched to a panel of industry judges who assess the ideas on the merits of its concept and its business potential before a winner is chosen and a $10,000 prize awarded.

The winners can use their prize money to take their idea to the next level while also receiving guidance on 'what's next'.

**Food, drink, WIFI and fun will be made available.**

**Childcare is also provided for those that need it, in a creche set up in a neighbouring room. Please indicate if you will need the creche when registering.**

### Saturday

Room 2.21 (Level 2) Flinders Tonsley

| | |
|---|---|
| 0800 | Coffee / Networking |
| 0830 | Completion of casual mapping |
| 0910 | Completion of actor mapping |
| 0950 | Exploring systemic uncertainties |
| 1045 | Morning Tea / Break |
| 1100 | Simulations |
| 1400 | Prototyping<br>Mentors to support participants from 1445 |
| 1530 | Break |
| 1545 | Iterated prototyping |
| 1715 | Startup/Serious Game Exchange |
| 1800 | Close |

### Sunday

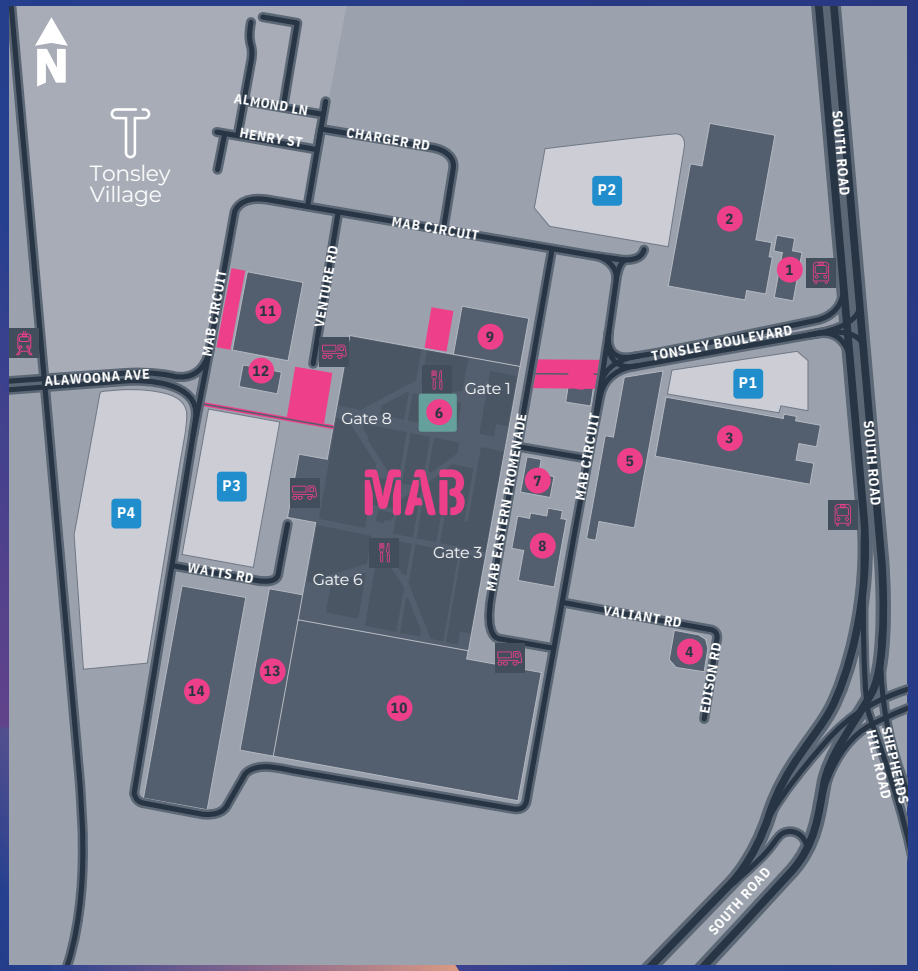
Room 2.21 (Level 2) Flinders Tonsley

| | |
|---|---|
| 0800 | Coffee / Networking |
| 0830 | Prototype iteration |
| 1000 | Develop pitches |
| 1130 | Practice pitches<br>Mentors to support with pitches |
| 1245 | Lunch / Networking |
| 1330 | Revise pitches |
| 1500 | Break |
| 1530 | Pitch Event<br>Judges and mentors invited |
| 1630 | Close |

# Site Map

6 Meet us at Tonsley Pod for registrations and networking






**MAB** Main Assembly Building

| | | |
|---|---|---|
| AZZO | Rockwell Automation | Funk Coffee+Food |
| EfficientSee | Micro-X | Sakura Sushi |
| CleanPeak Energy | Phoenix Contact | Three Little Pods |
| Flinders University | SAGE Group | Tonsley Pod |
| SA-H2H™ Hydrogen Cluster | ZEISS | |

1. Bedford Medical Centre
2. Mitsubishi Motors Australia Ltd Warehouse
3. Administration Building
   - CO-HAB | Mitsubishi Motors Office | Danfoss
   - Innovyz | Southern Adelaide Local Health Network | Tonsley Project Office
4. Hydrogen Park SA
5. South Australian Drill Core Reference Library
6. **Tonsley Pod (Future Energy Week Help Desk / Registrations)**
7. Radical Torque Solutions
8. Siemens Energy
9. Flinders University
   - College of Science & Engineering | New Venture Institute | Flinders Partners
   - Australian Industrial Transformation Institute | Medical Device Research Institute
   - Centre for Nanoscale Science & Technology | Tonsley Manufacturing Innovation Hub
10. TAFE SA
    - Humanihut | myCar | OPCE Training Facility
11. SA Power Networks Substation
12. Boiler House
13. Line 0
    - Tesla
14. Western Plant
    - Specialised Solutions | Cushman & Wakefield

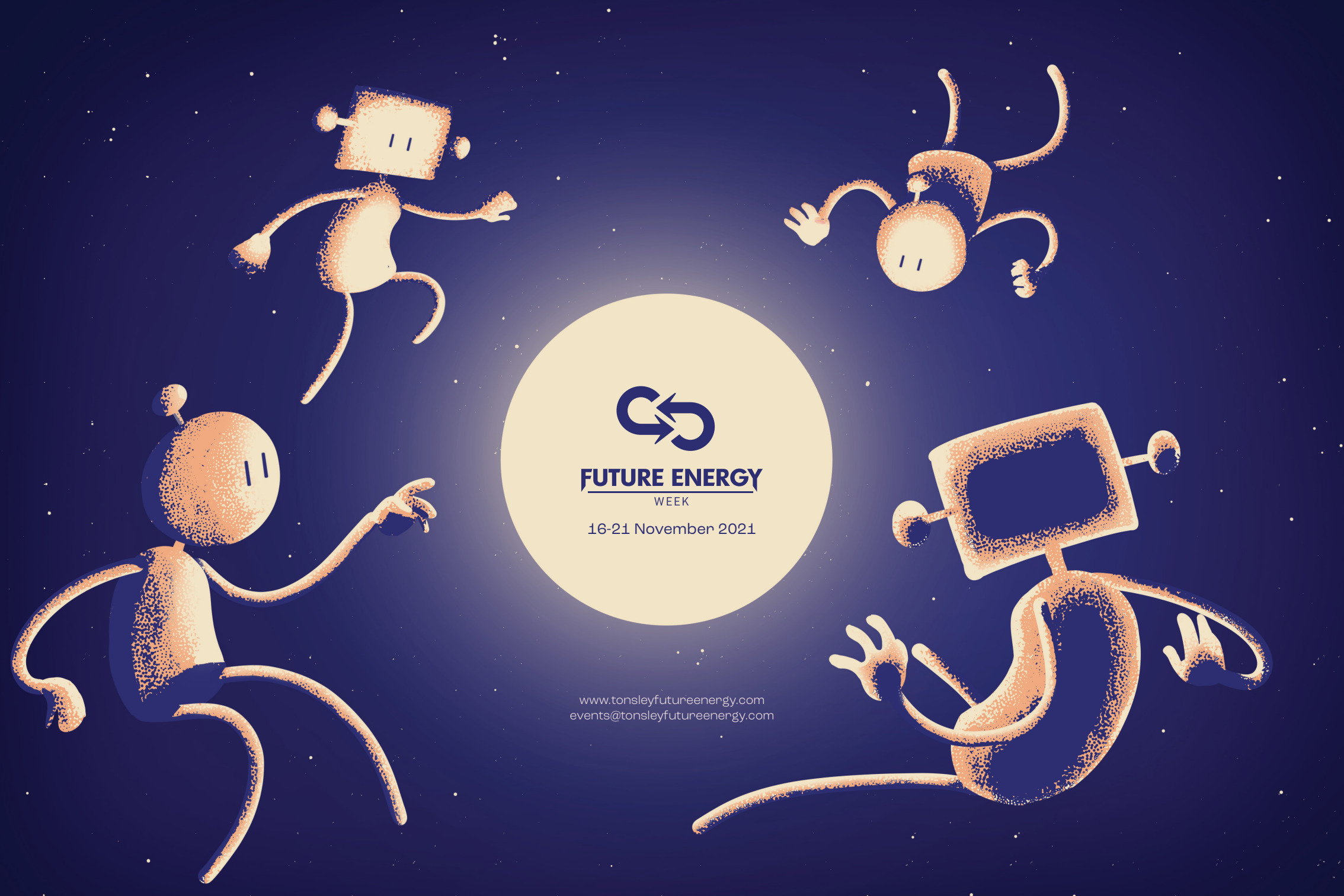
Key

| | | |
|---|---|---|
| P Carpark | Train Station | Bus Stop |
| Food / Café | Loading Dock / Deliveries | Park / Plaza |

Tonsley Innovation District

RenewalSA

Government of South Australia


FUTURE ENERGY
WEEK
16-21 November 2021
www.tonsleyfutureenergy.com
events@tonsleyfutureenergy.com