

University of Technology Sydney

# Energy Research at UTS

Damien Giurco  
Institute for Sustainable Futures



InPrInt – UFMG Collaboration  
20 November 2018

Our collaborative and creative workforce

Our systems, campus and precinct



# UTS 2027

OUR VISION IS TO BE A LEADING  
PUBLIC UNIVERSITY OF  
TECHNOLOGY RECOGNISED FOR  
OUR GLOBAL IMPACT

# Strongly committed to sustainability & social justice

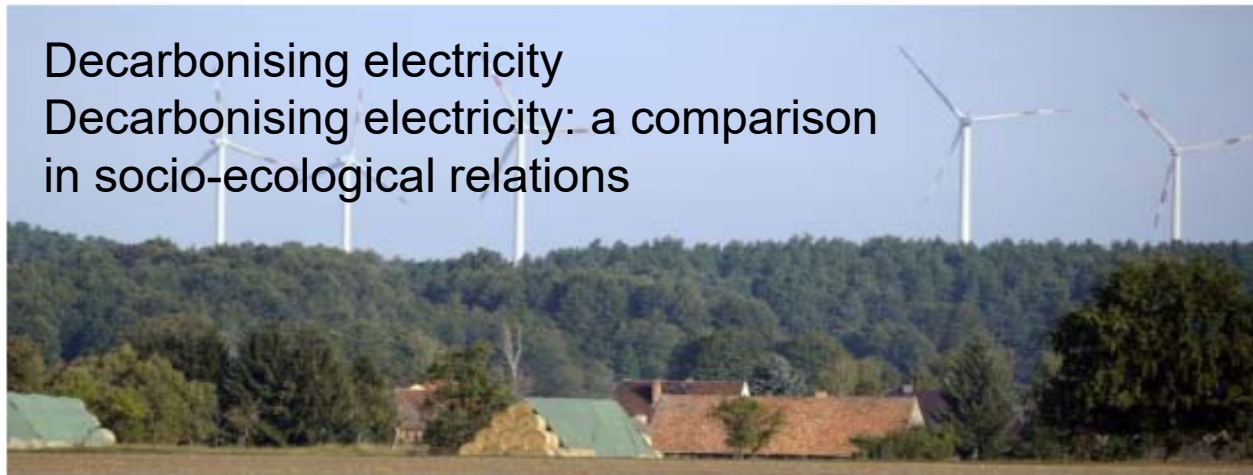


# Climate Justice Research Centre



The Climate Justice Research Centre brings together researchers in sociology, politics, anthropology, cultural studies, environmental science and journalism to focus on the socio-political drivers for climate justice and define a new research agenda on the centrality of justice concerns for climate action.

Decarbonising electricity  
Decarbonising electricity: a comparison  
in socio-ecological relations



# Centre for Clean Energy Technology

The Centre focuses on the development of efficient devices for energy harvesting, storage, and conversion.



Professor Guoxiu  
Wang

Director, Centre for Clean  
Energy Technology

**FUTURE  
BATTERY  
INDUSTRIES** CRC

## Prospectus



Providing strategic  
leadership for  
Australia's future  
battery industries

Proposed 5 year  
industry-research  
collaboration

## Research programs

1

Program 1  
Battery Industry  
Development

2

Program 2  
Battery Minerals,  
Metals and Materials  
(BM3): Processing  
Resources to  
Precursors

3

Program 3  
Manufacturing,  
Testing and  
Deployment of Cells  
and Battery Energy  
Storage Systems

# (Energy)Lab

Australia's leading platform for launching energy startups



ABOUT US OUR PROGRAMS OUR COMMUNITY OUR IMPACT NEWS

## Our Areas of Impact



**Net-zero  
Carbon Energy**



**Sustainable  
Resilient Cities**

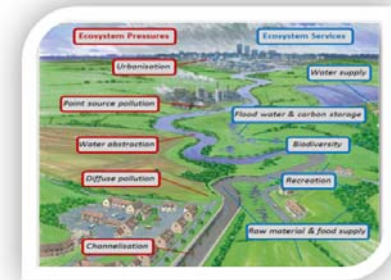


**Regions in  
Transition**

# Centre for Technology in Water and Wastewater

1. Electricity via salt gradient  
(osmotic power)

2. Energy from Biogas  
(anaerobic digestion from food  
waste, wastewater sludge)



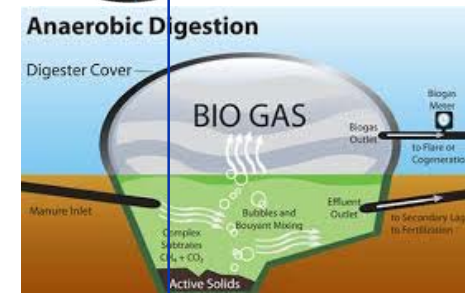
Catchment management



Water reuse & desalination



Industry research  
Impact



Resource recovery from  
wastewater

## Centre for Energy Policy



Professor  
Deepak Sharma

Director, Centre for Energy Policy

**The Centre for Energy Policy (CEP) addresses contemporary energy and environmental policy issues in national and international contexts.**

Key areas of focus are:

- Energy policy analysis
- Energy Market Reforms
- Environmental policy options
- Energy-economy-environmental interactions
- Energy-Food-Water security
- Institutions and political economy
- Infrastructure policy paradigms and frameworks

UTS Institute for sustainable Futures

# Energy Futures



Clean.  
Affordable.  
Reliable.  
Empowering.

100% renewables

Decentralised energy

Demand management, energy efficiency

Just transitions and community energy

Energy modelling and mapping

Social access / New business models

Energy policy

# Proposed Cooperative Research Centre



## INFORMATION PACK

### RACE FOR 2030

The Cooperative Research Centre for  
Reliable, Affordable, Clean Energy

- 1: RACE for Industry -**  
Boosting business energy productivity
- 2: RACE for Networks -**  
Optimising Australia's electricity grid
- 3: RACE for Consumers -**  
New energy technologies
- 4: RACE for the Future -**  
Foresighting, capacity building, education

UTS Institute for sustainable Futures led bid in development

# Mainstreaming 100% renewables

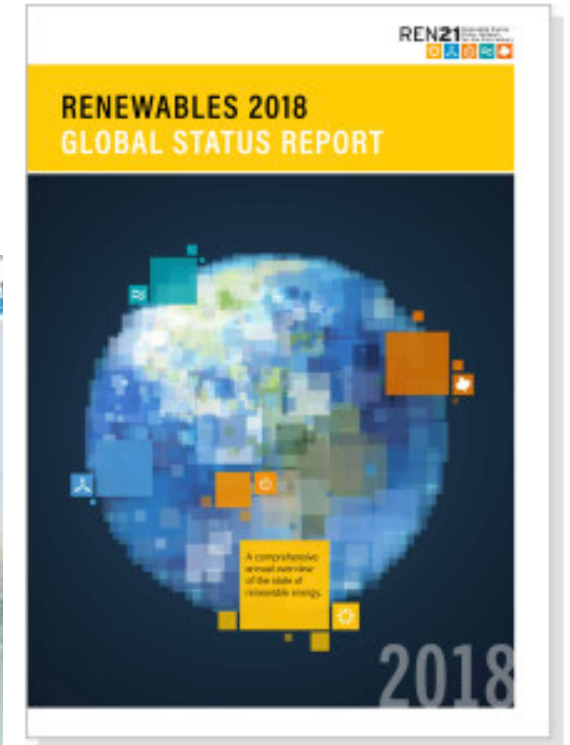
New model tests  
potential for 100%  
renewables by 2050

- BOOK LAUNCH SOON-



BUSINESS  
RENEWABLES  
CENTRE  
AUSTRALIA

FACILITATING RENEWABLES IN BUSINESS



# Further collaborative funding avenues...



Global Innovation Linkages program  
Business-Research & Australian-International

<https://www.business.gov.au/assistance/global-innovation-linkages-programme>



Australian Government

<https://internationaleducation.gov.au/endeavour%20program/scholarships-and-fellowships/international-applicants/pages/international-applicants.aspx>

**International applicants – activity level and duration (undertaken in Australia) (\$AUD)**

Category	Level	Duration	Tuition (up to)	Total Category Value
Postgraduate (long-term)	Australian Masters or PhD	Up to 2 years for a Masters  Up to 4 years for a PhD	Up to \$30,000 per calendar year	Up to \$140,500 (Masters) \$272,500 (PhD)
Research	Short-term research towards an overseas Masters, PhD or postdoctoral research	4 - 6 months	n/a	Up to \$24,500
Vocational Education and Training (VET) (long-term)	Australian Diploma, Advanced Diploma or Associate Degree	1 - 2.5 years	\$6,500 per semester	Up to \$131,000
Executive	Short-term Professional development	1 - 4 months	n/a	Up to \$18,500

# Looking forward to future collaboration...

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Institute for Sustainable Futures

