

Thesis Progress Form

CHARLES DARWIN UNIVERSITY

College of Engineering, IT, and Environment

Name: Shane Reynolds

Unit: ENG720

Title: Automatic generation control of a two area power system using deep reinforcement learning

Supervisors: Charles Yeo & Stefanija Klaric

Time & Date:

1 Progress since last meeting

- Research proposal has been iterated on a number of times providing refinement.
- Reached out to TGEN to try and secured timeseries data sets for training DRL agent.
- Secured a contact at TGEN and some preliminary information on available datasets.
- Reached out to DIgSilent to acquire Power Factory demonstration software.
- Applied to DIgSilent online form to acquire a demonstration copy of Power Factory.
- Completed Week 1 Research Skills Workshop
- Submitted signed copy of Supervision Agreement
- Completed Week 2 Research Skills Workshop
- Commenced research for literature review on AGC
- Compiled information on simulation packages used to model power systems
- Commenced writing for literature review



2 Discussion Points

None at this point in time

3 Plan until the next meeting

- Finalise Research Proposal and submit
- Continue working in literature review draft
- Develop a data management plan
- Find a contact at PWC to obtain timeseries data sets
- Investigate ways to simulate load demand data
- Investigate programming languages to implement DRL agent and how these integrate with simulation environment

Supervisor

March 12, 2020