

# **TITLE: Climate Change Emergency Report**

**Submitted By:** Sustainability and Environment

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## **LINKAGE TO INTEGRATED PLANNING AND REPORTING FRAMEWORK:**

### **Leaving a Legacy**

#### *Looking out for future generations*

1.1.4 Environmental Sustainability - To support Council, businesses and the community to achieve the best possible combination of environmental, social and economic outcomes.

### **ROLE:**

LEADER - Council grows strong, transparent and visionary leadership promoting unity to make our Tweed community even better tomorrow than it is today.

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## **EXECUTIVE SUMMARY**

Council's resolution to declare a climate emergency included a request for a report back on actions Council is currently undertaking to address climate change and further steps that can be taken to reduce emissions to levels at least consistent with Intergovernmental Panel on Climate Change (IPCC) targets.

This report describes 57 emissions reduction and adaptation actions in Tweed Shire Council's response to climate change. Thirteen of these are aspirational actions that need to be further developed to gather evidence of what impact they will have, what resources will be needed to deliver them, and the comparative efficacy of these actions compared to other current projects.

### ***Emissions reductions and targets***

For the Tweed Local Government Area to meet global emissions reduction targets:

- All electricity used in the Tweed would need to be sourced from renewable energy; and
- Road transport related emissions would need to reduce by 6%; or
- Waste and wastewater related emissions would need to reduce by 40%; or
- Agriculture and land use related emissions reduced by 67%.

Achieving any of these outcomes requires significant regulatory, system and behavioural changes that are outside of Council's direct influence. More work is recommended to describe how these outcomes could be achieved.

This report also highlights the main advocacy points to encourage regional collaboration, as well as state and federal intervention to take effective action on Tweed's community emissions.

Council's main quantifiable impact on reducing greenhouse gas emissions is through the reduction of its own corporate emissions footprint, which equates to 3% of the total estimated emissions from the Tweed community.

Delivering Council's Renewable Energy Action Plan (REAP) to avoid emissions from fossil-fuel based electricity and improved vehicle fuel efficiencies are the key actions Council is currently pursuing to reduce emissions that Council can directly control.

Council programs also work to lower emissions by influencing others in development and transport development outcomes, resource recovery, land and waterway management and in Council's procurement

and investment decisions.

37 corporate and community emissions reduction actions are highlighted in Attachment 3 as Council's existing, new and aspirational steps to reduce climate change. Where emissions impacts from these actions can be estimated, up to 29,000 tonnes of greenhouse gas emissions can be reduced or sequestered, equivalent to approximately 3% of the total annual estimated greenhouse gas emissions across the Tweed Local Government Area.

Council's current funding commitments for emissions reduction impacts equates to \$2.9M to reduce greenhouse gas emissions by up to 2,750 tonnes of CO<sub>2</sub>-e/year, with spending on 90% of those emissions reductions estimated to deliver a positive return on investment.

### ***Adaptation to climate change***

A range of Council's existing work programs actively contribute to reducing Tweed's climate change related risks such as proliferation of pest species, increased flood levels and frequency, loss of biodiversity, effect on freshwater supply, coastal erosion, increased bushfire events and intensity, drought, decline in the local economy, habitat displacement and impacts on coastal development.

20 climate adaptation actions in Attachment 4 highlight Council's key existing and new priorities to improve the resilience of the Tweed to the impacts of climate change, noting:

- Half of the actions listed will enable Council to have a direct impact on climate resiliency (as distinct from seeking to influence others' actions for outcomes).
- Five ongoing and three new projects with climate adaptation benefits are funded with a total value of over \$86.9 million. Three other existing actions do not have cost or funding certainty but are managed within existing budgets.
- Funding of \$400,000 on new climate resilience measures is in place, and a further \$70,000 per annum is needed.

### **RECOMMENDATION:**

That Council;

1. **Receives and notes the report**

2. **Endorses Attachments 3 and 4 as Council's 2020-2021 Interim Climate Action Plan**

3. **Notes that a further report will be provided including:**

**a) a scope of work to describe options for how Tweed's greenhouse gas emissions could be reduced in order to meet IPCC recommendations.**

**b) what next steps are needed to prepare a draft Climate Action Plan for community and stakeholder input.**

### **ATTACHMENTS**

1. Council's current response to climate change
2. Tweed Local Government Area emissions snapshot 2017

3. Emissions Reduction Actions
4. Climate adaptation actions
5. Potential new climate response actions

## **COUNCIL IMPLICATIONS:**

### **a. Legislation/Policy/Existing Strategic Plans**

This report and recommendations are consistent with existing strategic plans and policies. Some opportunities to review legislative barriers, prioritise resourcing of existing actions in strategies such as the Open Space Strategy and the Sustainable Agriculture Strategy have been described.

### **b. Sustainability:**

#### **i. Financial (Budget/Long Term Financial Plan/Whole of Life Cost):**

Adaptation actions: Five ongoing and three new projects with climate adaptation benefits are funded with a total value of over \$86.9 million, funded from reserve, loan and grant funds.

Emissions reduction actions: \$2.9M funding for emissions reduction actions include eight 'Ongoing' actions and new actions with an estimated potential to reduce greenhouse gas emissions by up to 2,750 tonnes of CO<sub>2</sub>-e/year, with 90% of those emissions reductions estimated to deliver a positive return on investment.

#### **ii. Environmental:**

Council's current and completed REAP energy efficiency and renewable energy projects have reduced Council's operational emissions by up to 3,500 tonnes CO<sub>2</sub>-e per year, a 14% reduction compared to Council's 2016/2017 baseline. Emissions reduction actions described in this report that are funded and that have a high confidence of being delivered could reduce a further 2,750 tonnes of CO<sub>2</sub>-e/year.

If actions and advocacy was successful in achieving a 100% renewable electricity grid and improved vehicle emissions standards, at least 676,910 tonnes CO<sub>2</sub>-e per annum would be avoided.

Climate change will increase the pressure of droughts and bush fires on wildlife and the natural environment, compounding the impacts of other threats such as river bank erosion, loss of bushland, weeds, human disturbance and feral animals.

The environment of Tweed Shire is of international significance and is particularly vulnerable to climate change. Special attention needs to be given to the many species that will struggle to tolerate more extreme climate conditions.

#### **iii. Social:**

Embedding climate change responses into Council operations and advocating for action from others to make our community resilient to climate change are important social signals that create hope and demonstrate Council's commitment to a thriving community.

Supporting equitable access to low emissions opportunities, such as renewable power from the grid, is an important social consideration. Solar on homes, for example, only benefits those who own their own property and have capital, credit or the capacity to repay loans.

Current and future actions that protect and strengthen the resiliency of the Tweed community to climate related hazards benefit all of the Tweed community and economy.

Protecting and building economic, social and environmental capital for future generations is a key form

of social benefit associated with climate change responses.

**c. Legal Considerations:**

Not applicable.

Some of the new actions recommended include reviewing existing legal frameworks to identify barriers and opportunities for change to support proactive responses and resiliency to climate change.

Assessing and reporting on climate change risks is increasingly being litigated in terms of corporate decision-making and director responsibilities.

**d. Risk Considerations:**

Climate change is acknowledged as a significant operational and financial risk to Council. A comprehensive climate change risk assessment for Tweed and Byron was completed in 2009 with grant funding from the Federal Government, but has not been updated since. A revised risk assessment is recommended as an important new action. This is a significant task that will need specialist expertise and stakeholder input.

**e. Engagement/Communication:**

**Inform** - Assisting the community to learn about Council services and programs.

No community engagement has been undertaken yet, as the resolution required a report back on Council actions to respond to climate change.

Over 40 managers and professional staff across Council have been engaged to develop this report. This was undertaken through several rounds of meetings including Corporate Management Team, Executive Leadership Team and program discussions.

Participants were asked to draw on current research and leading practice in their respective expert fields to describe proactive responses to climate change.

Over 100 suggestions for new actions were collated, with 30 actions presented to the Executive Leadership Team as potential low cost/high impact actions to respond to climate change. Action owners were then asked to describe costs, source of funding, timeframes, outcomes and confidence in delivery for shortlisted actions.

67 non-shortlisted actions are listed at Attachment 5. These were considered to have higher costs or lower impacts than the shortlisted actions.

**REPORT:**

**Overview**

Climate change responses are part of Council's core business wherever we ready infrastructure and settlements for climate hazards, where we build resilience in local social, economic or environmental assets, or where we influence greenhouse gas emissions reductions.

See Attachment 1 for an overview of Council's current climate change actions, particularly in priority response areas based on climate risk analyses.

## **Council's current and future response to climate change - recurring themes**

Discussions across Council program areas highlighted a range of recurring themes influencing Council's current and future response to climate change:

### Leadership and opportunity

- The skills and commitment of people in leadership roles will highly influence Council's response to climate change.
- Responsiveness to climate change can also offer an opportunity to retrofit the functionality and fit-for-purpose of our existing assets, programs and services.

### Resources are stretched

- Many actions in existing strategies remain unfunded. Evidence of new initiatives' effectiveness compared to existing commitments will help to re-prioritise effort if necessary.
- There is much to be gained by joining a collective effort via the Northern Rivers Joint Organisation (NRJO), and by working together with other councils (especially well-funded metropolitan areas) to advocate for and share knowledge about effective climate change action.
- Maintenance funds for built and environmental asset management are urgently needed to ensure resiliency for current and future climate conditions.

### Strategic evidence-based decision making

- Having a single-issue focus runs the risk of not assessing other unintended consequences.
- Council has a tendency to pursue new initiatives at the expense of fully funding and completing existing priorities.
- Evidence-based decision making is vital before we invest limited staff time and funding on new initiatives.
- What action will have the most impact, where and with who? What will the long term or life cycle costs and benefits be?

## **What should Tweed's emissions reduction target be?**

### Council's Corporate Emissions

Council's draft Climate Change policy proposes a corporate target of net-zero emissions by 2030. REAP efficiency and renewable projects are on-track to deliver a 14% reduction in Council's emissions for completed or in-progress initiatives. An offsite renewable power purchase agreement for future electricity contracts could potentially reduce emissions further. A strategy to deal with Council's residual emissions will need to be developed, depending on the finalisation of the Climate Change policy (public exhibition period concluded while this report was being prepared).

A 2017 snapshot of major sources of greenhouse gas emissions in the Tweed Local Government Area (Attachment 2) shows that Council's corporate emissions make up approximately 3% of the total Tweed Local Government Area emissions. The Tweed community's electricity and transport fuel sources, waste generation and agricultural and land use practices are where the Tweed's main emissions reduction challenges and opportunities lie.

### Tweed's Community Emissions

The Intergovernmental Panel on Climate Change (IPCC) 2019 Emissions Gap Report states global emissions of 25 gigatonnes or less by 2030 is the minimum target required to maintain global temperature rise to 1.5 degree Celsius of pre-industrial levels. Current climate change related effects in the Tweed and globally have been significant as a result of a 1.1 degree Celsius increase in global temperature.

Total emissions across the Tweed community need to reduce by two thirds in the next ten years to be consistent with the IPCC target, based on the Tweed's current rate of contribution to global emissions.

In 2017, Tweed's municipal emissions were estimated at over 1 million tonnes of CO<sub>2</sub>-e per year, or 11 tonnes CO<sub>2</sub>-e per person per year. Reductions would need to cut Tweed's emissions to around 300,000 tonnes of CO<sub>2</sub>-e per year, or 3 tonnes CO<sub>2</sub>-e per person per year, anticipating expected population growth.

#### How could we achieve our community emissions target?

The emissions reduction actions that current Tweed Shire Council programs could most confidently deliver (ie nine 'Ongoing' and 'New' actions) could reduce greenhouse gas emissions by up to 20,640 tonnes of CO<sub>2</sub>-e/annum, or approximately 2% of the total annual estimated greenhouse gas emissions across the Tweed Local Government Area.

Attachment 3 outlines 36 emissions reduction actions recommended as Council's current and new priorities. Where emissions impacts from these actions can be estimated, up to 29,000 tonnes of greenhouse gas emissions can be reduced or sequestered, equivalent to approximately 3% of the total annual estimated greenhouse gas emissions across the Tweed Local Government Area.

IPCC emissions reduction targets could be met in the Tweed if:

1. All electricity used in the Tweed was sourced from renewable energy; and
2. If road transport related emissions reduced by 6%; or
3. If waste and wastewater related emissions reduced by 40%; or
4. If agriculture related emissions reduced by 67%

Describing what actions could enable the Tweed to meet the IPCC 2030 timeframe and achieve a 3 tonnes CO<sub>2</sub>-e per person per year target, and at what cost, is additional work that is recommended prior to committing to targets and seeking stakeholder engagement.

Describing and comparing a range of actions that would have a significant impact on Tweed's total emissions footprint could help understand, activate and advocate for effective action such as:

- Residents own actions: improving energy efficiency in homes and businesses, increasing uptake of renewables, switching to low emissions transport options
- Systemic changes in grid electricity power sources (grid scale, Tweed scale, village scale, street scale, house scale etc), low emissions vehicle availability, building efficiency standards and regulations
- Sequestration: tree planting, 'blue carbon' drawdown of atmospheric carbon in coastal ecosystems.

#### **Advocacy**

Council's advocacy for change from other levels of government is vital to support Council's emissions reductions efforts.

Key advocacy messages to communicate directly, via the NRJO, industry associations and via community advocacy include:

- Support for the NSW State Government's net zero emissions plan and Federal Government's long-term climate strategy to:
  - support regions and communities to position for low-carbon industries, technologies and opportunities.
  - fast-track zero-emissions electricity generation, storage and supporting technologies.
  - enable carbon-neutral mobility and transport solutions particularly by establishing low emissions standards for vehicles, addressing barriers to low or zero emissions vehicle uptake such as lack of charge infrastructure, and supporting land use decisions and infrastructure to provide for active, shared and low emissions transport.
  - create beneficial investment in the Tweed by the NSW Government in its rollout of electric vehicle

charging station infrastructure and electric bus trials outlined in its NSW Electric and Hybrid Vehicle Plan.

- encourage greater availability of carbon credits for the land use and agriculture sectors.
- strengthen protections for ecosystems, especially those with high carbon storage potential.
- decarbonise new buildings by 2030 and existing buildings by 2050 by fast-tracking improved energy standards for new homes and buildings and ratings/retrofit programs for existing homes, buildings and appliances.
- fund local government's climate change risk assessments and resilience.

### **Adaptation**

Assessing built and natural assets' vulnerability to climate hazards, and building resilience into existing and new development is the most significant and direct role Council can play in responding to climate change.

Attachment 4 outlines 20 actions that highlight Council's key existing and new priorities to improve the resilience of the Tweed to the impacts of climate change, noting:

- Half of the actions listed will enable Council to have a direct impact on climate resiliency (as distinct from seeking to influence others' actions for outcomes)
- Five ongoing and three new projects with climate adaptation benefits are funded with a total value of over \$86.9 million. Three other existing actions do not have cost or funding certainty but are managed within existing budgets.
- Funding of \$400,000 on new climate resilience measures is in place, and a further \$70,000 per annum is needed.

### **OPTIONS:**

Council may decide to endorse the report and recommended next steps, namely:

- receive the report
- request a report back about:

1. A scope of work to describe options for how Tweed's greenhouse gas emissions could be reduced in order to meet IPCC recommendations.

2. What next steps are needed to prepare a draft Climate Action Plan for community and stakeholder input.

or

- receive the report; and
- propose alternative next steps for Council to respond to climate change.

### **PREVIOUS COUNCIL RESOLUTIONS:**

Thursday 19 September 2019 Climate Emergency Declaration, Council resolved to:

*"1. Declare that we are in a state of climate emergency that requires urgent action by all levels of government, including by local councils.*

*2. Note that on 14 August 2019 Council's Youth Advisory Committee proposed that Youth Council, as a group, recommend that Council declare a 'Climate Crisis'. As this proposal was made during an*

*informal session of the meeting such a recommendation could not be made. All members of the committee asked that this be noted with consideration being given to presenting at a future Community Access meeting.*

*3. Note that our young people have the most at stake as they are the ones that will face the worst impacts of climate change if this is not addressed rapidly and effectively.*

*4. Support the Schools Strike for Climate on the 20th September that is calling on adults to join them in the strike, and notes Council staff where practical are able to use leave entitlements if they wish to attend. Council encourages striking children to do so after seeking permission from their parents/guardians.*

*5. Note that 45 other Australian Local Councils have declared a Climate Emergency, along with 987 government bodies around the world.*

*6. Note Tweed's 2017 Flood was the largest on record, and the two recent major fires that have burnt hundreds of hectares of Tweed's bushland.*

*7. Notes last year's IPCC report that global emissions of carbon dioxide must peak by 2020 and reduce by 45% by 2030 to keep the planet below 1.5°C increase.*

*8. Note that even at 1.5°C increase there will be significant climate disruptions including the Great Barrier Reef predicted to lose 90% of its coral and the outlook for the reef now classified as very poor.*

*9. Note the recent advice by Sir David Attenborough on Climate Change that "We cannot be radical enough in dealing with the issues that face us at the moment".*

*10. Note the numerous positive steps available to address this Climate Emergency if public and political will is mobilised.*

*11. Note that the fastest and second fastest growing jobs in America are solar technicians (300,000 solar jobs) followed by wind power technicians, with the coal industry providing only 50,000 jobs.*

*12. Note its commitment to reporting on and reducing emissions through the Global Climate Change Compact and the Cities Power Partnership.*

*13. Note its Renewable Energy Action Plan target of 25% renewable energy by 2022 and 50% by 2025, and Council's zero waste target is a great start but does not account for all Council's emissions such as transport, buildings and infrastructure emission.*

*14. Bring back a report on actions Council is currently undertaking to address climate change and further steps that can be taken to reduce emissions to levels at least consistent with IPCC targets, and provides this report to the Youth Council for their input.*

*15. Include advice in all reports to Council meetings on the implications for sustainability from the staff recommendations.*

*16. Requests the Mayor to write to the NSW State and Federal Governments and local Members of parliament requesting them to declare a climate emergency and prioritise actions to address this emergency.*

*17. Through the Mayor encourages neighbouring Local Government Areas to join with us in*



*declaring a climate emergency."*