The NSW Government is proposing changes to the Building Sustainability Index (BASIX).

By improving water and energy consumption for new houses and residential apartments, BASIX will deliver benefits to the NSW community of over 1.3 billion dollars over the next 50 years.
Ensuring a sustainable future for NSW

Reviewing BASIX targets will ensure NSW can deliver housing that meets the needs of the state’s growing population, while protecting our environment.

The Building Sustainability Index (BASIX) is an important part of NSW’s development application process. It aims to reduce residential homes’ water and energy consumption and greenhouse gas emissions.

The NSW Government is proposing to increase the BASIX targets to keep them:
- current and in line with national standards
- fair for all
- future-proof against changing climate.

An independent review has shown this could provide an additional net benefit to the community of over half a billion dollars over the next 50 years.

The Department of Planning & Infrastructure has worked with a wide range of stakeholders to develop the proposed targets. We now invite feedback on the proposed targets, as well as on the best way to implement them and what sort of support would be needed.

For detailed maps that show the target increases by dwelling type and region go to: https://www.basix.nsw.gov.au/basixcms/on-exhibition.html#mapsandcaps

For best results, it is recommended the material be viewed online.
What are the proposed changes?

The NSW Government is proposing new BASIX targets to further reduce water and energy consumption in new houses and residential apartments.

The proposed BASIX targets vary by region and development type. For most developments, existing targets will increase to require an additional 10% savings.

Click on the maps below to view the target increases for single detached houses. For detailed maps that show the target increases by dwelling type and region go to Maps and Caps. (https://www.basix.nsw.gov.au/basixcms/on-exhibition.html#mapsandcaps)

Changes to BASIX policy settings

The target review also reflects proposed changes to a number of BASIX policy settings.

**Water**
- Removal of ‘low-water-use species’ as a commitment for single dwellings
- Introduction of a correction factor for laundry facilities with alternative water connections

**Thermal Comfort**
- Removal of the ‘Rapid’ assessment method
- New DIY assessment tool aligned to new heating and cooling caps and with new generic window selections

**Energy**
- Updated heating and cooling defaults where no active systems are selected.
- Updated small-scale technology certificate (STC) methodology for solar hot water and heat pump systems.

**Project settings**
- Occupancy data revised to reflect 2011 Census data
- Greenhouse gas emission factors aligned to 2011 data

These proposed policy changes were included in the scenario testing and their impact is reflected in the proposed targets.

For more information about these changes and the investigations made in support of them, see the Target Review Research Paper.

New BASIX targets

**Water**

The water savings targets would increase to between BASIX 20 and BASIX 50 depending on region and development type. This represents a typical target increase of an additional:
- 10% for detached houses, attached houses and low-rise buildings
- 5% for mid-rise buildings.

There will be no changes to the water target for high-rise buildings in coastal locations.

**Thermal comfort**

The proposed caps for heating and cooling are equivalent to an increase of approximately one star under the Nationwide House Energy Rating Scheme (NatHERS). This will be equivalent to achieving 5.5–6 stars (out of a possible 10).

To learn more, download the table showing the proposed heating and cooling caps.

**Energy**

The energy targets would increase to between BASIX 10 and BASIX 50 depending on region and development type. This represents a typical target increase of an additional:
- 10% for detached houses, attached houses and low-rise buildings
- 5% for mid-rise and high-rise buildings.

What are BASIX targets?

BASIX targets are calculated as a percentage of savings against NSW average benchmarks (being the average-per-person water consumption and greenhouse gas emissions levels across the state).

These percentage savings are then expressed as a target – BASIX 50 represents a 50% saving against the benchmark.

BASIX assesses a proposed dwelling based on these benchmarks, and taking into account regional variations such as soil type, climate, rainfall and evaporation rates. You can find more information on the BASIX website.

<table>
<thead>
<tr>
<th>Benchmark</th>
<th>Average-per-person household water consumption and greenhouse gas emissions</th>
</tr>
</thead>
<tbody>
<tr>
<td>BASIX 10</td>
<td>▼10% saving against benchmark</td>
</tr>
<tr>
<td>BASIX 40</td>
<td>▼40% saving against benchmark</td>
</tr>
<tr>
<td>BASIX 50</td>
<td>▼50% saving against benchmark</td>
</tr>
</tbody>
</table>
How will the changes affect you?

Revised BASIX targets will ensure more people can live in water- and energy-efficient homes, and housing is well adapted for future weather conditions.

In developing the proposed BASIX targets, the Department of Planning & Infrastructure conducted extensive cost–benefit analyses and consulted with the building and construction industry. This research found that the proposed changes will provide important benefits to the community, strengthen the industry and help secure NSW’s water and energy supplies.

Strengthening Industry

The proposed targets are in line with national sustainable building standards and recognise current industry best practice.

The proposed targets will encourage building professionals to adopt more sustainability technologies and improved design practices. The targets may also increase demand for businesses that offer sustainable building products and services.

Find out more about the impact on design and developments, including expected costs by downloading the Allen Consulting benefit:cost analysis.

BASIX was introduced 1 July 2004. Since its introduction over 250,000 BASIX homes are estimated to have saved more than 70 billion litres in potable water* and 2 million tonnes in greenhouse gas emissions. This is equivalent to planting over 6 million trees to offset CO$_2$e, and saving enough water to fill the Nepean Dam.

*Timing water supply.
Target Review

Securing NSW’s water and energy supplies

Around 380,000 residential developments will be built in NSW in the next decade. As the population of NSW continues to grow, it is vital we find ways to safeguard our water and energy supplies.

The proposed increase in BASIX targets would result in additional aggregated savings over the next 50 years of:

- 328 gigalitres of mains-supplied potable water
- 7,763 gigawatt hours of electricity and
- 25,908 petajoules of gas
- 5.8 megatonnes of greenhouse gas emissions.

This will provide a net financial benefit to the NSW community of over $511 million (that’s $1.3 billion of household savings for water, electricity and gas bills, less increased capital costs of $794 million.) Importantly, this will significantly reduce our impact on the environment.

Benefitting households

Increasing the BASIX targets by 10% means that every year, an average BASIX home1 will save a further:

- 1,457 kilowatt hours of electricity and gas
- 37,161 litres of mains-supplied potable water
- 1.2 tonnes of greenhouse gas emissions.

Investing in the design and fit-out measures to meet the proposed revised targets will return approximately $7,254 to the householder in utility bill savings over the life of the building (assumed to be 40 years).

The changes to BASIX targets will not affect housing affordability, because any additional household costs will be offset by lower utility bills.

1 Single detached 4 bedroom house located in the Sydney Metropolitan region
Impact on design and developments

The changes required to design and construction to meet the proposed target increases may mean extra costs. However, they will also provide important benefits to residents, the wider NSW community and the environment.

The proposed targets will ensure new developments are well adapted for future weather conditions, affordable to run and comfortable to live in over the life of the building.

Click on the image to see what changes are required for a typical BASIX house to meet the new targets.

BASIX 50

Most homes can achieve the proposed target increase with simple and affordable additional features.

To compare a BASIX 40 and BASIX 50 home, go to: https://www.basix.nsw.gov.au/basixcms/target-review-overview and view the ‘Impact on design and developments page’
Existing developments

If you have already submitted your development application to council and it has been approved, providing you do not substantially change the development prior to completion, your project will not be affected by the proposed revised target settings.

If you have a project you are working on and you have not yet submitted the development application, there will be a period between any announcement and implementation that will provide an opportunity to complete your certificate prior to new targets taking effect. It can then be submitted for approval under the current target settings – provided you do so within the timeframe that the certificate is valid.

If you commence your project after the date for the changes is announced, it may be worth considering how you could meet the revised targets should you be unable to complete your certificate before the new targets take effect.

Costs of increased targets

An extensive benefit-cost analysis by the Allen Consulting Group found that every $1 spent on additional compliance measures would benefit the NSW economy by $1.64. It also found that extra mortgage repayments to cover the upfront compliance costs would be more than offset by the annual utility bill savings.

Read the BASIX research paper for more information on the benefit-cost analysis, including the methodology used. Extra mortgage repayments are offset by an average of $246 in additional energy and water bill savings.

BASIX gives developers and homeowners flexibility to decide which measures they apply to meet the targets.

We estimate that it will cost an extra $4,069 in design and construction costs to ensure an average house that already complies with the BASIX 40 target meets the revised BASIX 50 target. This could be reduced as little as $378 by incorporating particular design features – for example, installing better insulation and changing the window orientation so ceiling fans can provide adequate cooling and air-conditioning systems aren’t needed.

The Commonwealth Department of Resources, Energy and Tourism has published a study Identifying Cost Savings through Building Redesign. This showed builders can more cost effectively meet higher energy efficiency standards by design rather than upgrading building specifications.


* based on a four bedroom home in west Sydney

Flexible compliance options

The Compliance pathway to move from BASIX 40 to BASIX 50

Scenario 1: Technology based

- double glazing
- 3.5-star reverse cycle air-conditioning system

Scenario 2: Design based

- orient glazing to north
- optimise cross ventilation
- install ceiling fans

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Why the targets are under review

Revising the BASIX targets provides a low-cost and effective way for NSW to stay at the forefront of innovation in residential development and sustainability. Reviewing the targets will ensure BASIX remained current, fair and future-proof.

Current

The proposed targets respond to changing design, available technology and emerging selection trends, and align with national building sustainability commitments.

Fair

The proposed targets recognise regional variations in climate and construction practice. The proposed targets also ensure that more people benefit from living in water- and energy-efficient houses, especially the financially vulnerable.

Future-proof

The proposed targets ensure new housing is well adapted for future weather conditions, affordable to run and comfortable to live in over the life of the building.

What has happened so far?

The NSW Government has:

- reviewed BASIX policy settings in consultation with key stakeholders
- modelled outcomes and proposed new targets
- commissioned an independent cost–benefit analysis of the proposed changes. Conducted by Allen Consulting Group, the analysis was supported by costings from quantity surveyors and a stakeholder workshop.
- placed the proposal on public exhibition

To view the documents on exhibition, including the supporting research paper and the benefit-to-cost analysis, use the download links at the bottom of this website.
Have your say

The NSW Government is now seeking feedback on the proposal and the implementation strategy, as well as on the support that industry organisations and individuals would need to meet the new targets.

The government will review all submissions and make a decision on the proposal.

Provide Feedback

The NSW Government developed the proposed BASIX targets after extensive consultation with key stakeholders.

We are now seeking feedback on:

- the proposed targets, including the potential costs and benefits
- the timeframe to implement the proposed changes
- the preferred process for implementing the new targets
- the type of training and support industry members would require.

To make a formal submission, please complete the online form.

To provide informal feedback, please complete the online survey.

The proposed BASIX targets will be on exhibition from 13 December 2013 to 31 January 2014.

Find out more

To learn more about the proposed changes to the BASIX targets including the benefit to cost study by Allen Consulting Group and the new BASIX target maps, click on the links at the bottom of this website to download various supporting documents.

Contact us

To contact the Department of Planning and Infrastructure about this target review

Please call: The Information Centre on 1300 305 695 or
Email: basixreview@planning.nsw.gov.au.

What will happen if the proposed targets are approved?

If the proposed changes to the BASIX targets are approved, we expect to implement the new targets with sufficient leadtime to give homeowners and industry organisations time to prepare for the changes.

The government will facilitate training and support to help industry professionals understand and implement the necessary changes.