

Japan NZEB Roadmap

NZEB Goals

Japan's NZEB goals are part of the broader framework of policy instruments to reduce carbon dioxide emissions in the country.

Tangible NZEB milestones have been set to be achieved till 2050. All new buildings will be zero energy buildings by 2020 and all existing buildings will be zero energy buildings by 2050. Thrust of the policy efforts are transforming residential sectors. Net-zero-energy houses will be available in the market by 2020.

Regulations

Energy Efficiency Building Codes

Japan has set voluntary building standards for both residential and commercial buildings. These standards are being strengthened repeatedly to achieve the stated goals by 2030.

Comprehensive Assessment System for Building Environmental Efficiency (CASBEE)

CASBEE, a green building rating system, evaluates environmental performance of buildings beyond site level. CASBEE has been made mandatory by around 24 local governments in Japan.

<http://www.ibec.or.jp/CASBEE/english/>

Top Runner Program

Weighted average energy efficiency of products sold in the target year must comply with the standards. Different standards are formed for each product, varying by the technology used and also by the potential to improve efficiency of the technology by the target year. As of 2009, 21 end use products are under the scope of this program.

www.climatepolicy.jp/thesis/pdf/09035dp.pdf

http://www.eccj.or.jp/top_runner/

Economic Instruments

Japan has launched series of loans, grants and tax incentives program to give impetus to energy efficiency in buildings.

Low Carbon Cities Promotion Act

Tax breaks are offered for “low carbon buildings”, essentially buildings exceeding minimum energy performance standards or with features that increase

<http://www.iea.org/policiesandmeasures/pams/japan/name-132526-en.php>

Eco-point Housing Program

Points are provided to home owners for energy efficient measures in new or renovated buildings which can be later exchanged for purchasing energy efficient appliances or products.

Japan Net Zero Energy Building Roadmap

Zero-Energy Housing Grant Program

Selected zero energy residential projects are provided grants equivalent to approximately half of the subsidy that they are otherwise eligible for. Both new and renovation projects are considered for grants.

Flat 35 loan by Japan Housing Finance Agency

Loans on low interest rates are provided to houses with energy efficient measures.

www.jbaudit.go.jp/english/exchange/pdf/e15d04.pdf

<http://jhf.go.jp/english/index.html>

Subsidy Programme for Residential PV systems

<http://www.iea.org/policiesandmeasures/pams/japan/name-21048-en.php>

Information & Outreach

While there are no outreach programs specifically for NZEBs, some builders and government organizations have started NZEB demonstration projects on their own.

Links

National Target
<ol style="list-style-type: none"> 1. Basic Energy Plan – METI , 2010 (Cabinet Decision in June 2010) (http://www.meti.go.jp/english/press/data/pdf/20100618_08a.pdf) 2. ZEB Study Group (Agency for Natural Resources and Energy) 3. Mid-and-long Term Roadmap (Ministry of the Environment) 4. G20 Energy Efficiency Policies and Measures - Japan http://g20-energy-efficiency.enerdata.net/policies/buildings-japan.html http://www.iea.org/policiesandmeasures/pams/japan/
Regulations
<ol style="list-style-type: none"> 1. Regulation and Standard for Housing and Building (Energy Conservation Act) - 1999 http://www.asiaeec-col.eccj.or.jp/law/ken1_e.html 2. Energy Conservation Law <ul style="list-style-type: none"> • Energy Efficiency standard for houses and buildings • Top- runner Program (applied to household appliances) since 1999 (last amended 2013) http://www.meti.go.jp/english/press/2011/0124_01.html http://aceee.org/files/proceedings/2010/data/papers/2154.pdf http://www.asiaeec-col.eccj.or.jp/top_runner/index.html 3. Top Runner Program - mandatory construction material standard - (Since 2013): (http://www.climatepolicy.jp/thesis/pdf/09035dp.pdf) 4. Committee on Realization and Dissemination of ZEBs (Established by the Agency for Natural Resources and Energy, May-November 2009) 5. Energy Conservation Policy for Housing (2006) http://www.mlit.go.jp/jutakukentiku/house/torikumi/jyuseikatsu/hyodai.html 6. Comprehensive review of Japanese Energy Policy (2014) http://www.meti.go.jp/ 1. Environment and Energy Friendly Building Mark http://www.iea.org/policiesandmeasures/pams/japan/name-21110-en.php
Economic Incentives
<ol style="list-style-type: none"> 2. Promotion of Zero Energy Building (ZEB) and Zero Energy Houses (ZEH) http://www.enecho.meti.go.jp/policy/enterprise/policies/ 3. Housing Eco-point Program http://jutaku.eco-points.jp/top.html 4. Premium Loans for Energy Efficient Retrofit/Construction for Housings (2003) http://www.iea.org/policiesandmeasures/pams/japan/ 5. Financial measures for houses (subsidy, tax, preferential loan) (since 2002) http://www.iea.org/policiesandmeasures/pams/japan/ 6. Promotion of Home Energy Management System (HEMS), Building Energy Management System (BEMS) (2001) http://sii.or.jp/ 7. Low Interest Loans for Energy Efficient Retrofit/Construction for Buildings http://www.mlit.go.jp/jutakukentiku/house/seido/31ecobuil.html
Outreach
<ol style="list-style-type: none"> 1. Thermal insulation performance labelling of windows (since 2008) http://www.meti.go.jp/english/press/2011/0527_03.html 2. National Promotion for Energy Efficient Home Appliances http://www.enecho.meti.go.jp/info/tender/tenddata/1202/120224b/3.pdf 3. Promoting Sustainable Lifestyle and Houses: "Lo-House" Promotion (2006) http://www.iea.org/policiesandmeasures/pams/japan/name-24369-en.php 4. Energy Efficiency Labelling system (sine 2000)

<p>http://www.asiaeec-col.eccj.or.jp/contentso3.html http://www.asiaeec-col.eccj.or.jp/databook/2007e/pdf/09.pdf</p> <p>5. Energy Performance Description System for Houses http://www.mlit.go.jp/jutakukentiku/house/jutakukentiku_house_tk4_000010.html</p> <p>6. Guidebook on Energy Conservation in Buildings http://www.asiaeec-col.eccj.or.jp/databook/2011/ http://www.asiaeec-col.eccj.or.jp/brochure/pdf/guidebook_for_buildings_2010-2011.pdf</p>
Demonstration & Research
<p>NZEB Demonstration Project (Public Offering) http://sii.or.jp/zeb26r/file/yoryo.pdf http://sii.or.jp/house2015/</p>
Other Initiatives
<p>Rating System : CASBEE (Comprehensive Assessment System for Built Environment Efficiency) http://www.ibec.or.jp/CASBEE/english/</p>