

Energy efficiency and zero energy buildings

Brazil-UK Building Energy Epidemiology Workshop

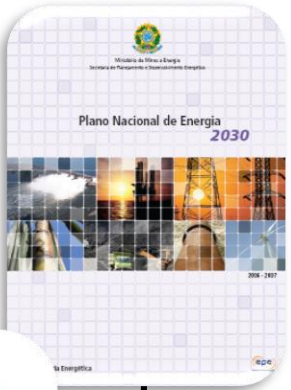
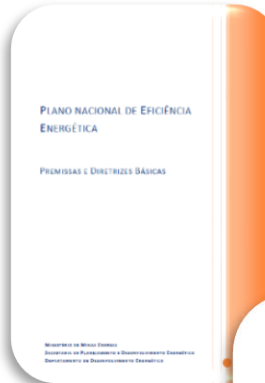
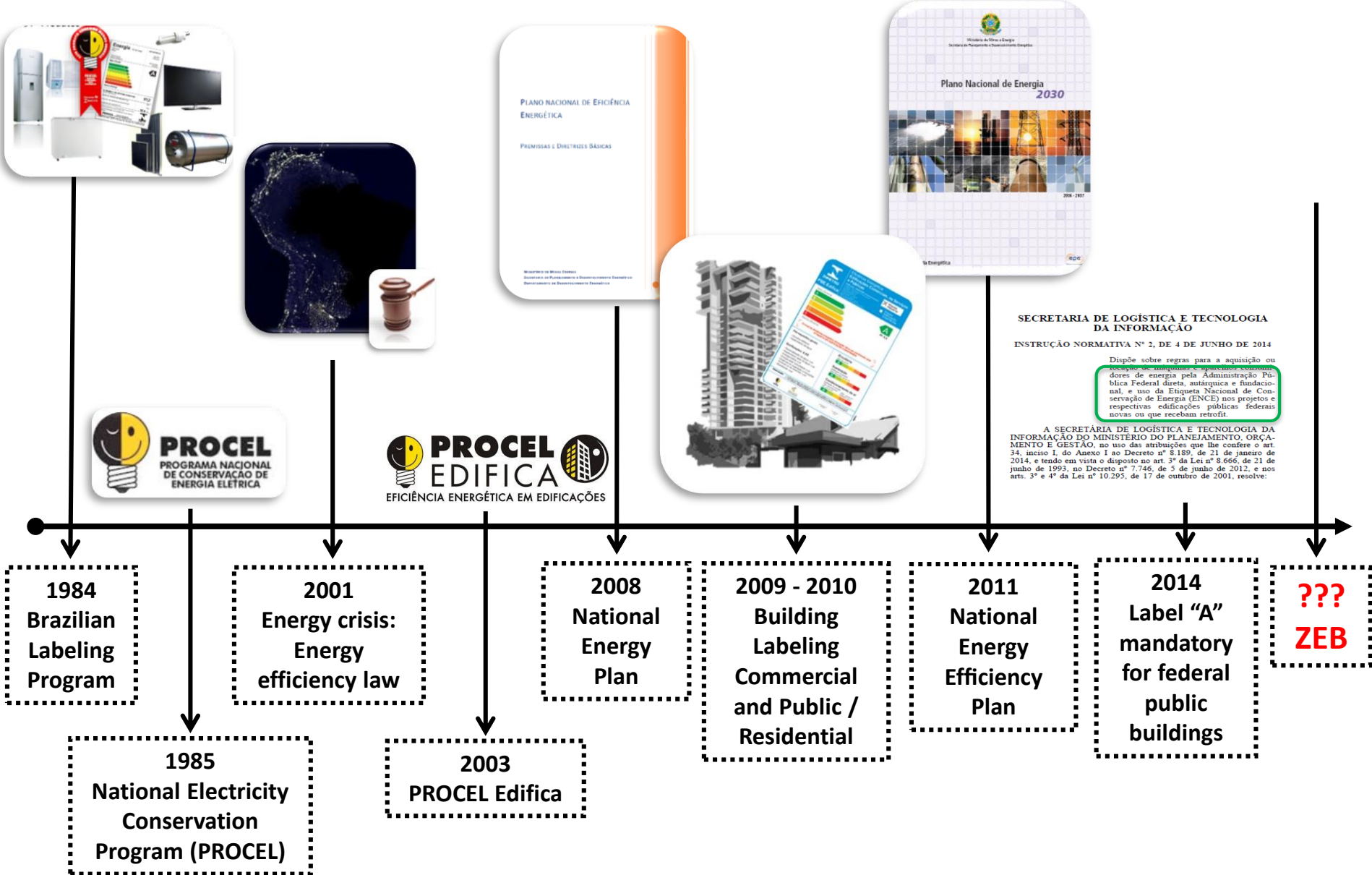


Michele Fossati

São Paulo - SP

April 2018

REGULATIONS



SECRETARIA DE LOGÍSTICA E TECNOLOGIA DA INFORMAÇÃO

INSTRUÇÃO NORMATIVA Nº 2, DE 4 DE JUNHO DE 2014

Dispõe sobre regras para a aquisição ou uso das atribuições que lhe confere o art. 34, inciso I, do Anexo I ao Decreto nº 8.189, de 21 de janeiro de 2014, e tendo em vista o disposto no art. 3º da Lei nº 8.666, de 21 de junho de 1993, no Decreto nº 7.746, de 5 de junho de 2012, e aos arts. 3º e 4º da Lei nº 10.295, de 17 de outubro de 2001, resolve:

A SECRETARIA DE LOGÍSTICA E TECNOLOGIA DA INFORMAÇÃO DO MINISTÉRIO DO PLANEJAMENTO, ORÇAMENTO E GESTÃO, no uso das atribuições que lhe confere o art. 34, inciso I, do Anexo I ao Decreto nº 8.189, de 21 de janeiro de 2014, e tendo em vista o disposto no art. 3º da Lei nº 8.666, de 21 de junho de 1993, no Decreto nº 7.746, de 5 de junho de 2012, e aos arts. 3º e 4º da Lei nº 10.295, de 17 de outubro de 2001, resolve:

1984
Brazilian
Labeling
Program

2001
Energy crisis:
Energy
efficiency law

2008
National
Energy
Plan

2009 - 2010
Building
Labeling
Commercial
and Public /
Residential

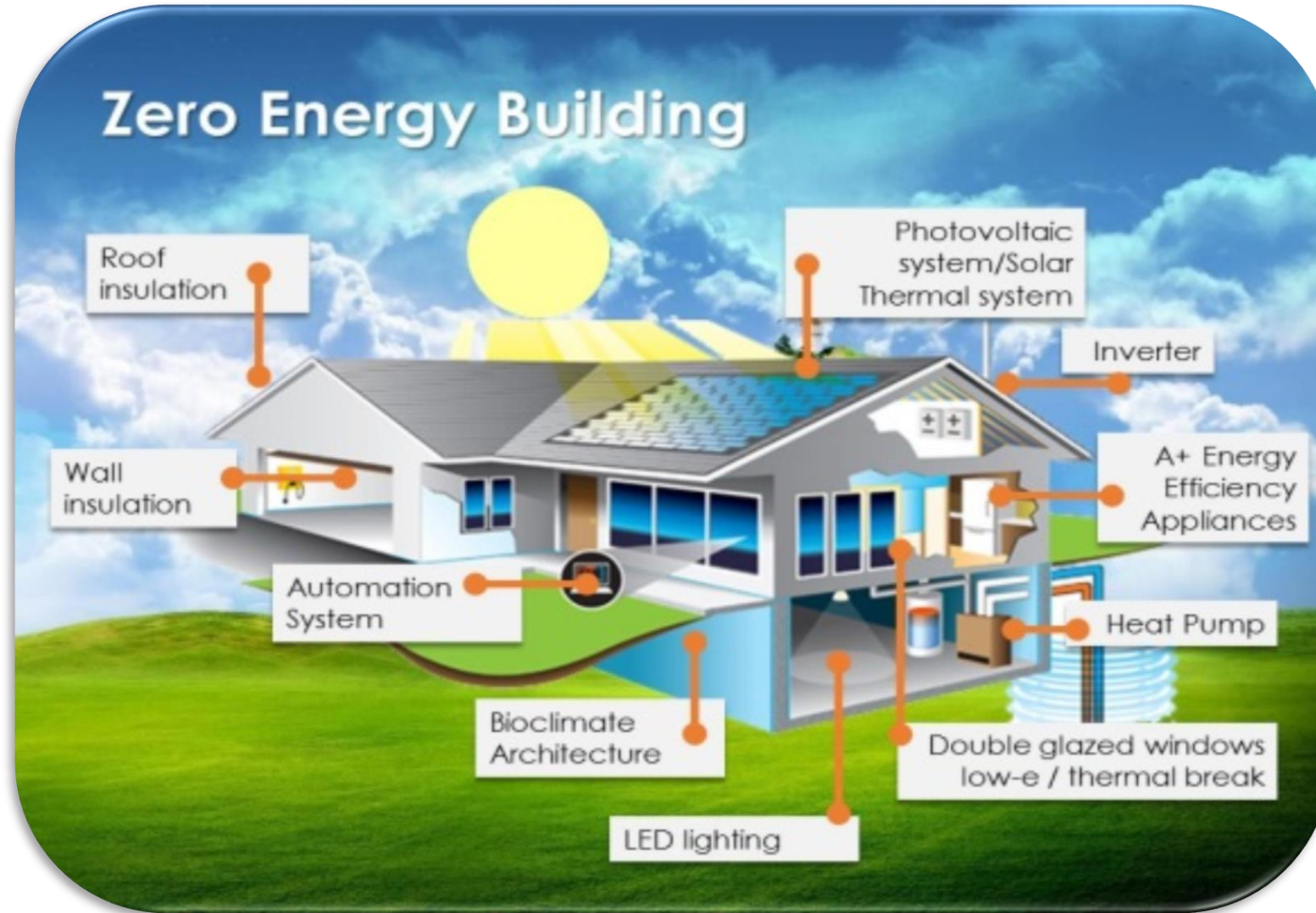
2011
National
Energy
Efficiency
Plan

2014
Label "A"
mandatory
for federal
public
buildings

???
ZEB

1985
National Electricity
Conservation
Program (PROCEL)

2003
PROCEL Edifica



Zero Energy Building



Buildings Energy
Efficiency

REGULATIONS



- ✓ Volunteer Program
- ✓ Improvement of the method: consumption indicators in primary energy
- ✓ High labeling costs, carried out by accredited inspection boards
- ✓ Lack of government incentive

**DIRECTIVE 2010/31/EU OF THE EUROPEAN
PARLIAMENT AND OF THE COUNCIL
of 19 May 2010
on the energy performance of buildings**

Article 9

Nearly zero-energy buildings

1. Member States shall ensure that:

- (a) by 31 December 2020, all new buildings are nearly zero-energy buildings; and
- (b) after 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings.

Member States shall draw up national plans for increasing the number of nearly zero-energy buildings. These national plans may include targets differentiated according to the category of building.

2. Member States shall furthermore, following the leading example of the public sector, develop policies and take measures such as the setting of targets in order to stimulate the transformation of buildings that are refurbished into nearly zero-energy buildings, and inform the Commission thereof in their national plans referred to in paragraph 1.

3. The national plans shall include, inter alia, the following elements:

Zero Net Energy

As spelled out in the California Energy Efficiency Strategic Plan, the state has ambitious goals

- All new residential construction will be zero net energy (ZNE) by 2020.
- All new commercial construction will be ZNE by 2030
- 50% of commercial buildings will be retrofit to ZNE by 2030
- 50% of new major renovations of state buildings will be ZNE by 2025.

***In Brazil, ZEB is still not encouraged as it is in
Europe and in the United States***