



Federal Ministry
for Economic Affairs
and Energy



Germany's energy efficiency policy

Berlin, November 23rd, 2015

David Lerch / Division IIB1 – General issues of energy efficiency



Federal Ministry
for Economic Affairs
and Energy



德国节能政策

柏林，2015年11月23日

David Lerch / IIB1分部 —— 节能问题概述



Structure

- Status report: energy demand, development of energy productivity, targets & main measures
- National Action Plan on Energy Efficiency (NAPE)



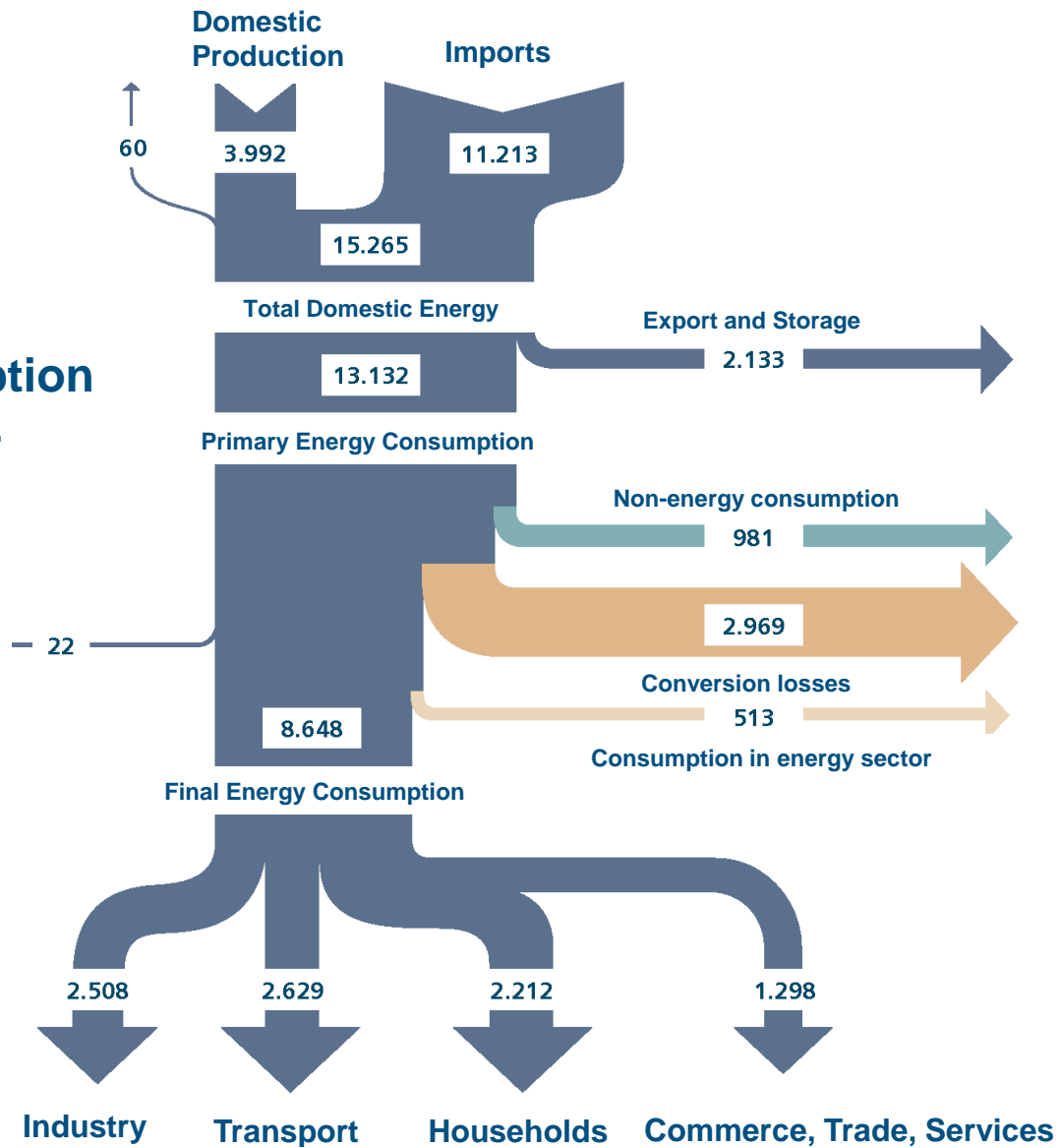
结构

- 现状报告：能源需求，制定能源生产效率、节能目标及主要措施
- 国家节能行动计划（NAPE）



Energy consumption in Germany 2014

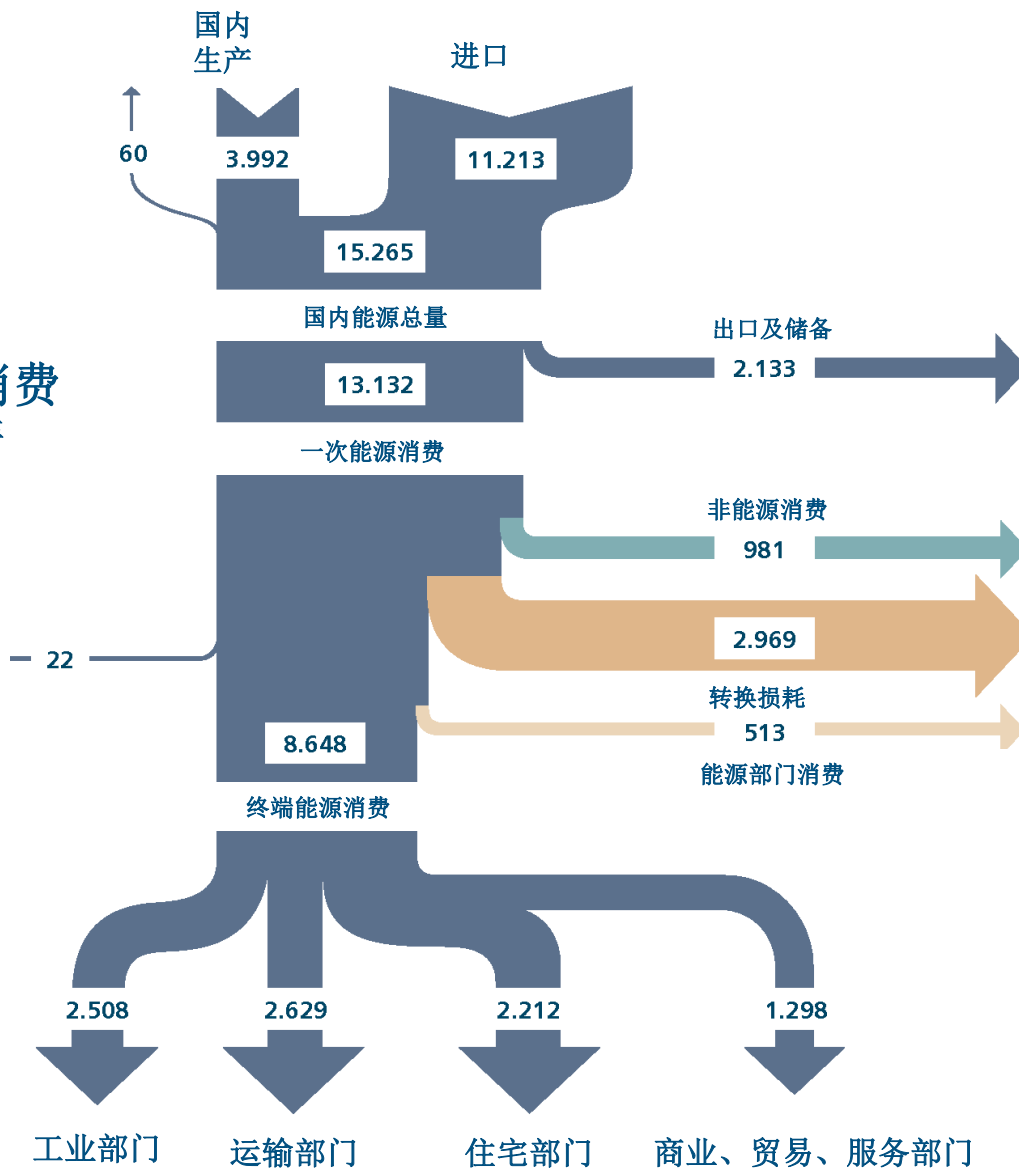
Source: AGEBA, 2015





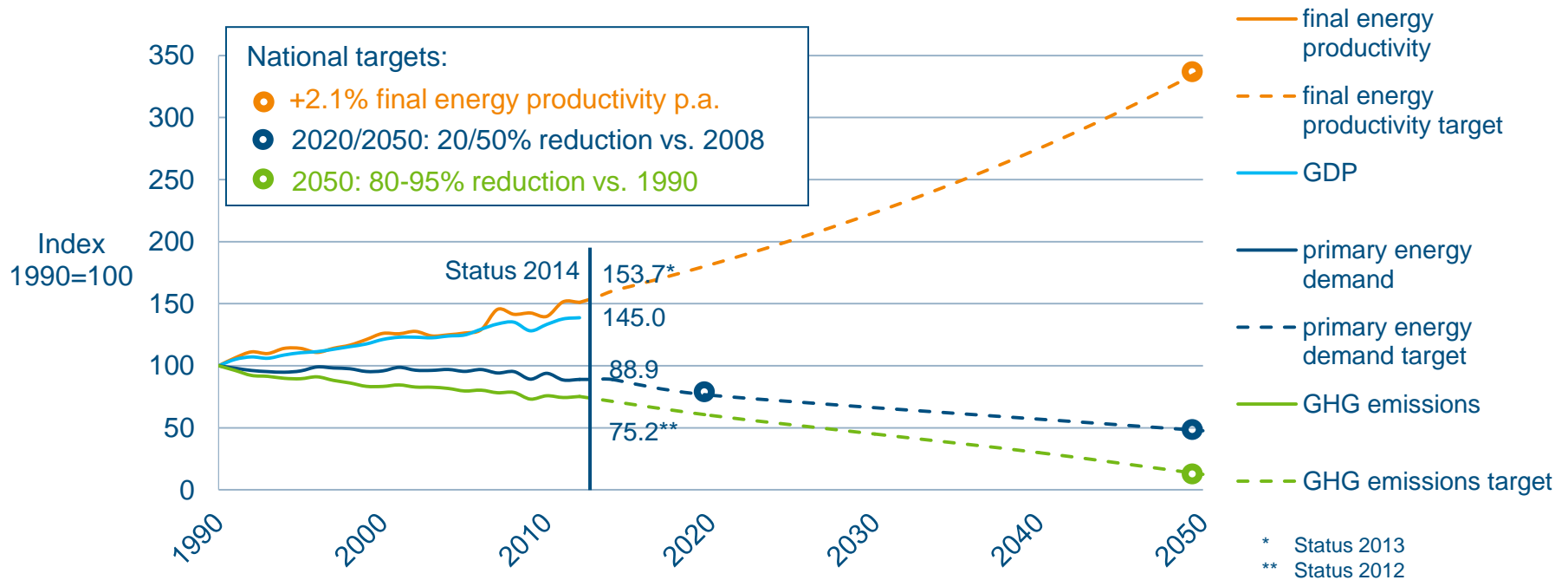
2014年德国能源消费

资料来源: AGEB, 2015年





Efficiency targets and energy productivity in Germany

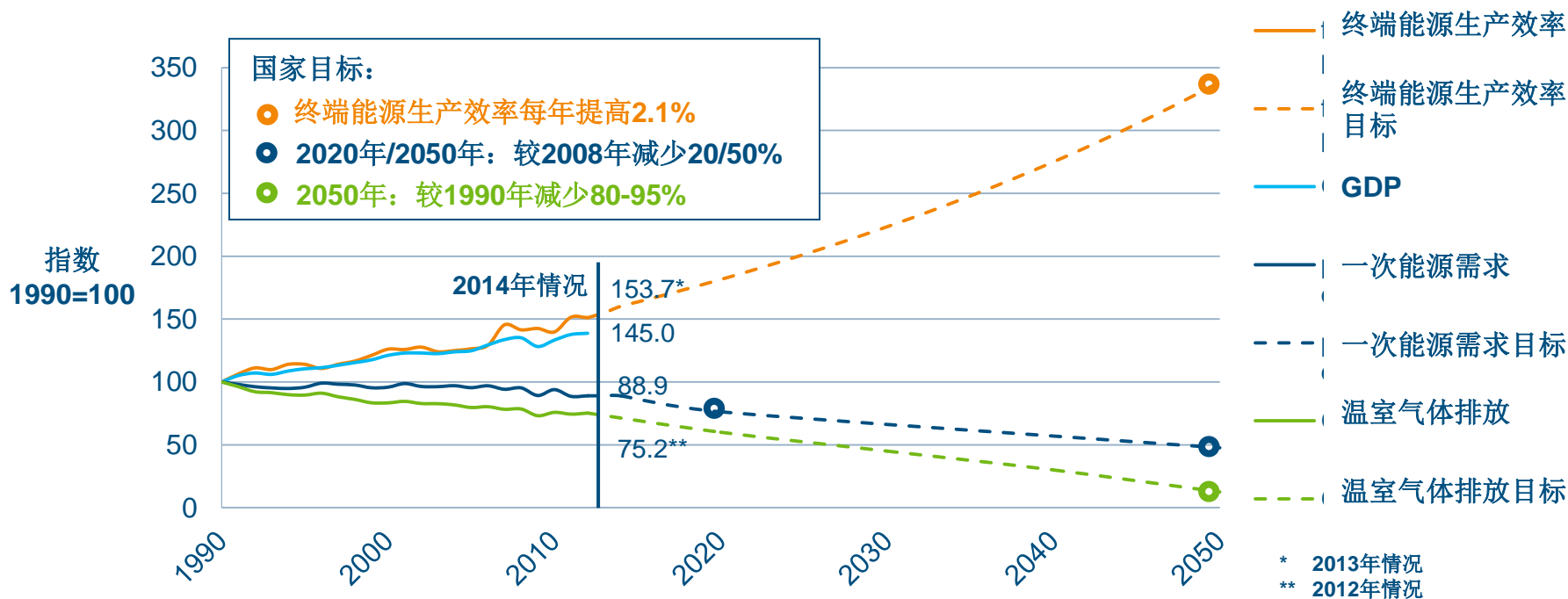


Source: Ecofys 2015

Efficiency measures allow clean growth by decoupling economic growth from energy consumption.



德国节能目标和能源生产效率



节能措施有效摆脱经济增长对能源消费的依赖，真正实现绿色增长。



Main federal-level energy efficiency measures



Buildings

- Energy consulting
- KfW programmes for construction and renovation
- MAP (Market Incentive Programme)
- Energy saving legislation



Products and appliances

- Energy consulting (Energy Efficiency Campaign)
- NTRI: National Top Runner Initiative
- Energy Efficiency Labelling Ordinance
- Ecodesign Directive (eff. classification)



Industry and business

- Energy consulting services
- KfW credits and loans (Effizienzprogramm, BAFA)
- Obligatory energy audits
- European emissions trading (ETS)



Transport

- Labelling (EU Directive Fuel Economy)
- Regulation of consumption
- Motor vehicle taxation
- E-mobility strategy
- Mobility and fuel strategy

Energy efficiency policies find a balance between consultation, information, incentives and regulation.



联邦层面主要节能措施



建筑

- 能源咨询
- 德国复兴信贷银行建设改造项目
- **MAP**（市场激励计划）
- 节能立法



产品与家电

- 能源咨询（节能活动）
- **NTRI**: 国家领跑者计划
- 《节能标签条例》
- 《生态设计指令》（效率分级）



工业与商业

- 能源咨询服务
- 德国复兴信贷银行信贷和贷款
（**Effizienzprogramm, BAFA**）
- 强制性能源审计
- 欧盟排放交易体系（**ETS**）



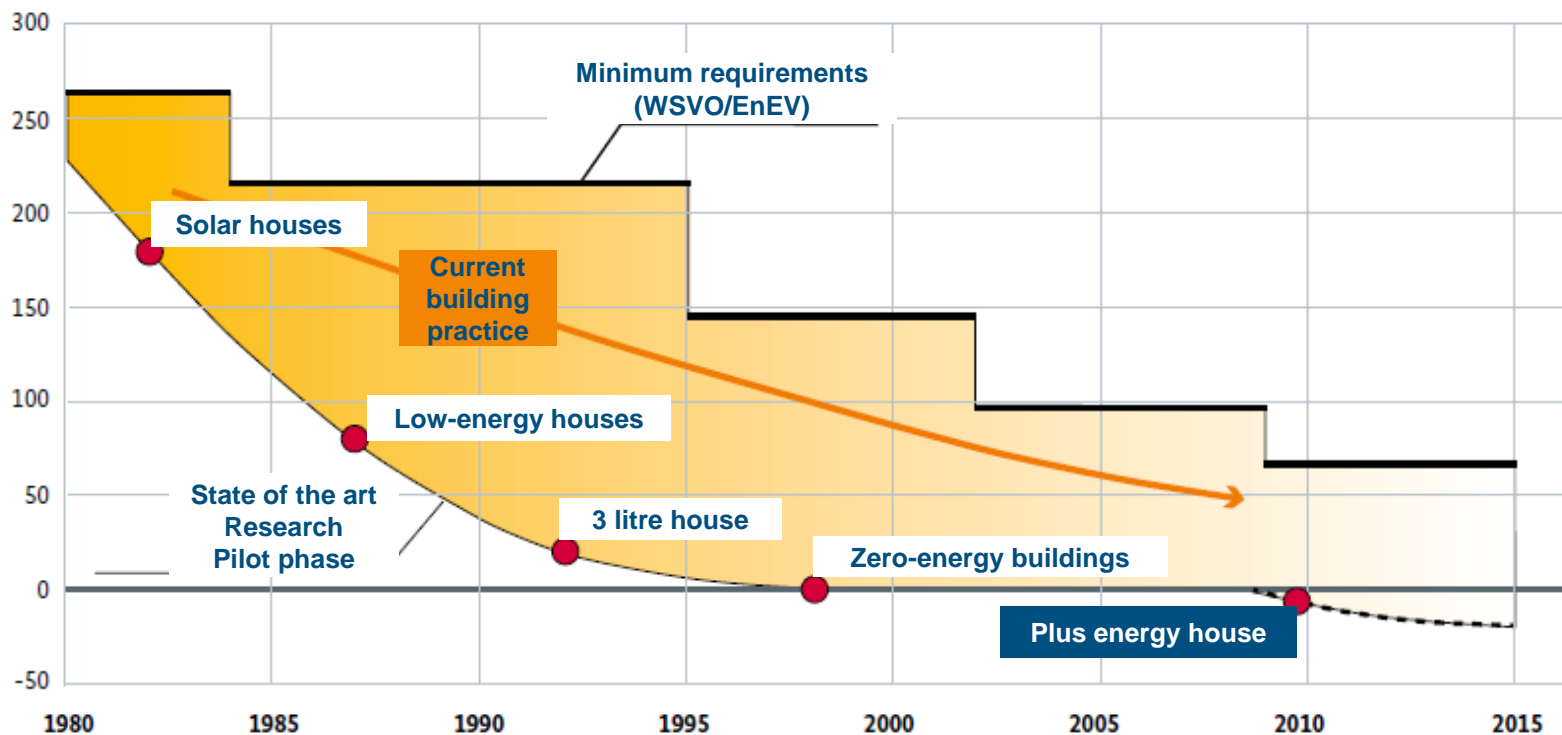
交通运输

- 标签（欧盟燃油经济性标签指令）
- 消费监管
- 机动车辆征税
- 电动交通战略
- 交通和燃油战略

节能政策在咨询、信息、激励与监管之间取得平衡。



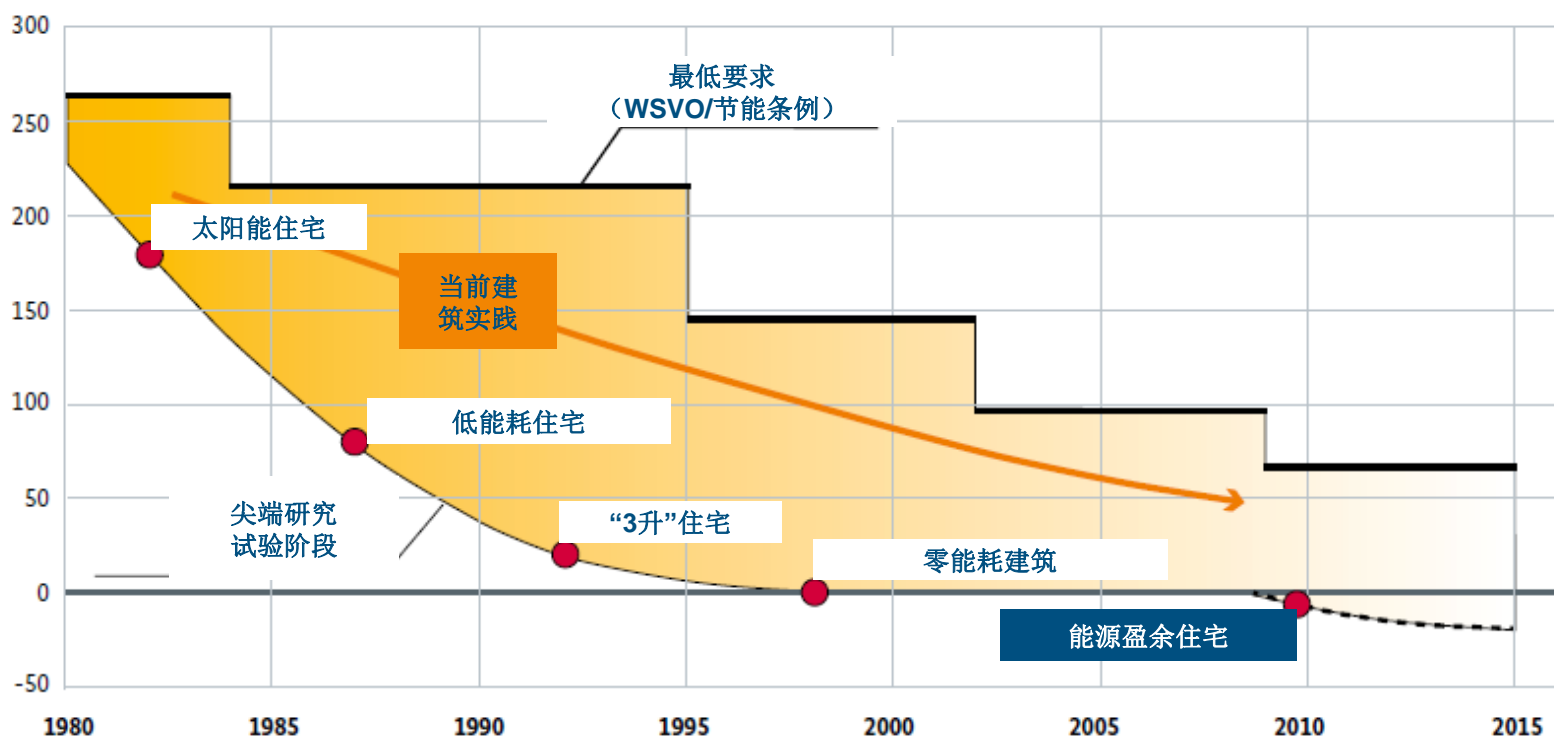
Learning curves in energy efficient buildings



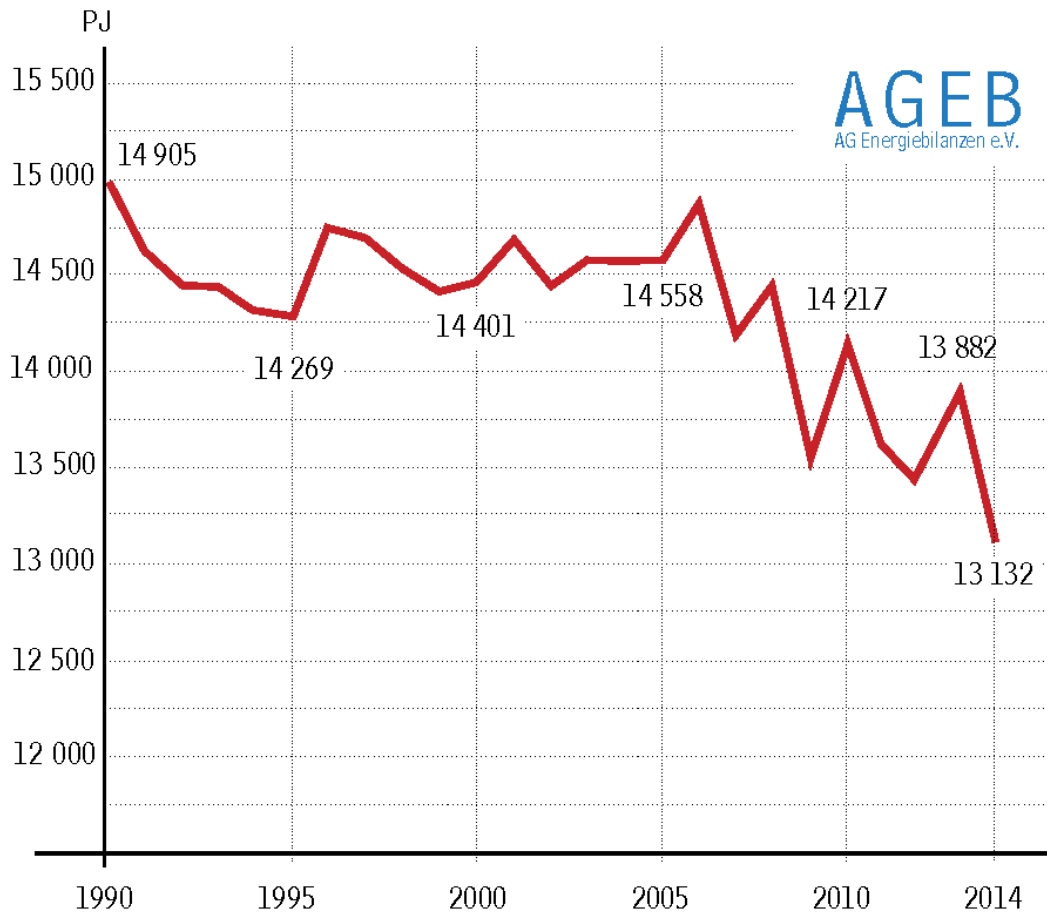
Building efficiency regulation follows the technical learning curve to stay ambitious.



节能建筑学习曲线



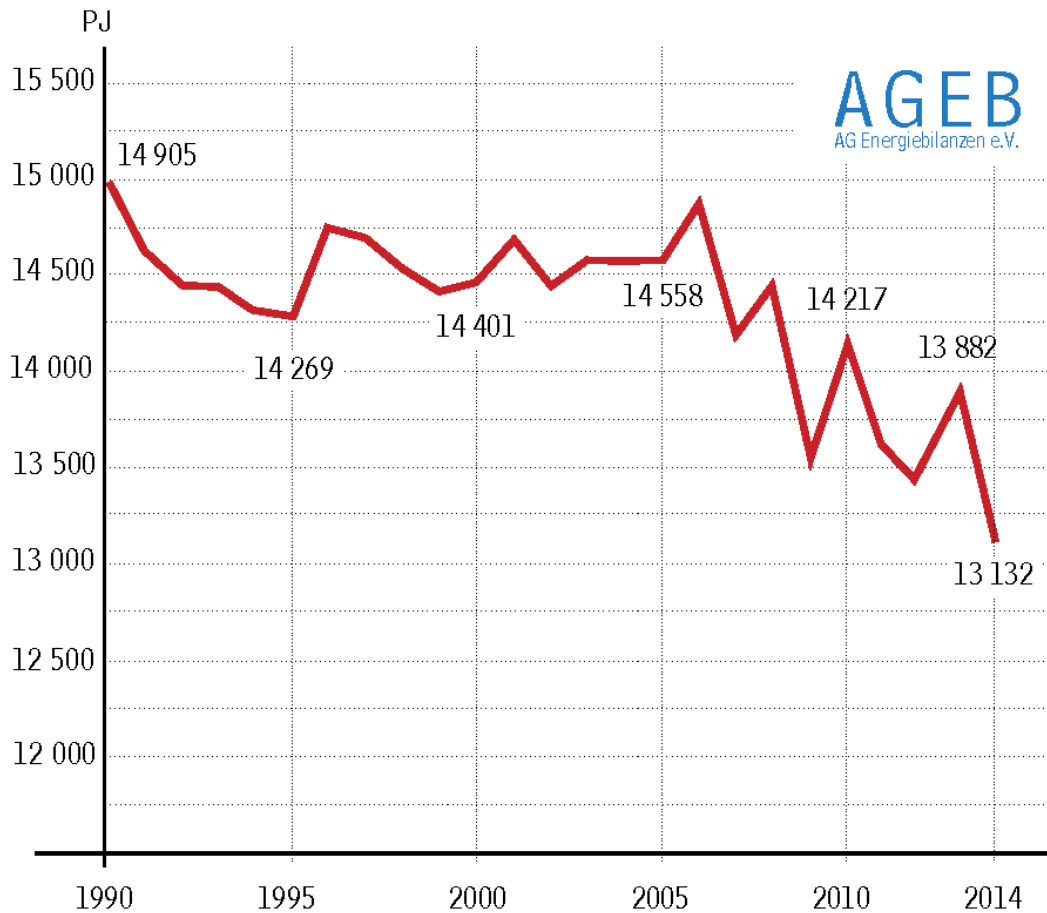
建筑节能规定遵循技术学习曲线，以确保实现宏远目标。



Primary Energy Demand
reduced by 9% since 2008.

Additional measures needed
to achieve 20% reduction
until 2020.

Source: AGEB, 2015



自**2008**年以来，一次能源需求减少**9%**。

需采取进一步措施，以确保**2020**年前实现一次能源需求减少**20%**的目标。

资料来源：AGEB，2015年



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National Action Plan on Energy Efficiency (NAPE)



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国家节能行动计划（NAPE）



Key pillars of the National Action Plan on Energy Efficiency



Stepping up
energy efficiency
in buildings



Energy efficiency
as a return and
business model



Individual
responsibility for
energy efficiency



*All the measures under the NAPE adhere to a common principle:
supply information - provide support - demand action.*



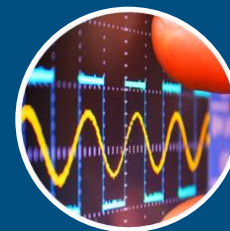
国家节能行动计划核心支柱



加紧落实建筑节能



节能作为一种回报
和商业模式

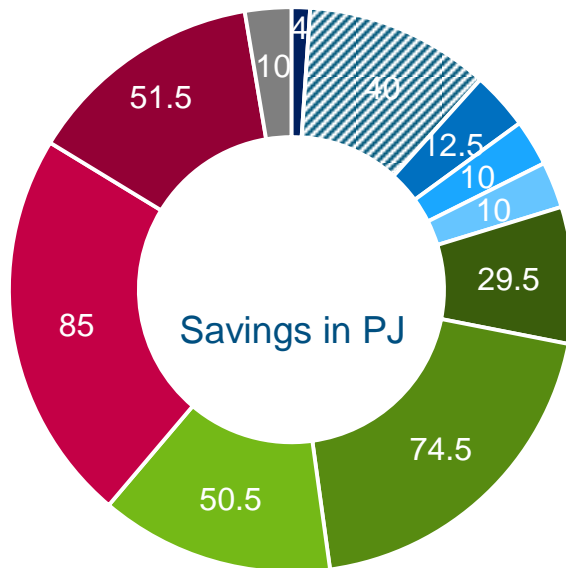


节能降耗人人有责



国家节能行动计划下所有措施均遵循一个共同原则：
信息公开 - 提供支持 - 付诸行动。

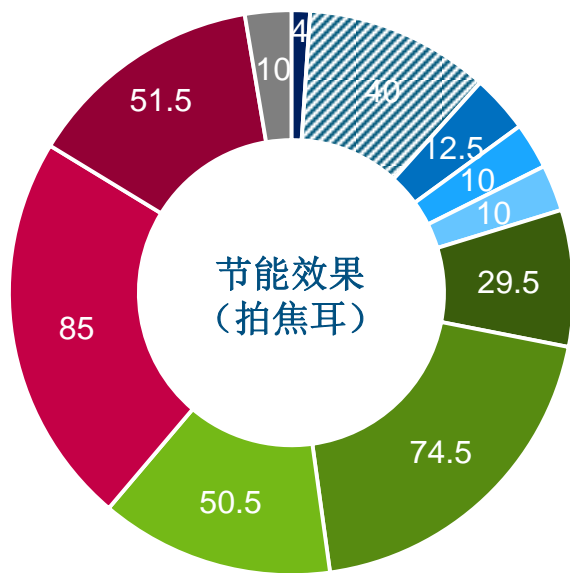
NAPE: Additional energy efficiency measures in Germany



- Quality assurance and optimising energy consulting
- ❖ Incentives for energy-efficient renovations (total savings not clear)
- Upgrading, continuation and increased funding of the CO2 building renovation programme
- Promoting "energy performance contracting"
- National energy-efficiency label for old heating installations
- Upgrading the KfW energy efficiency programmes
- Energy efficiency networks initiative
- Obligation to perform energy audits for non-SMEs
- National top runner initiative
- Introduction of a competitive tendering scheme for energy efficiency
- Additional immediate measures

These measures shall lead to additional energy savings of 350-380 PJ by 2020.

国家节能行动计划：德国其他节能措施



- 质量保证和能源咨询优化
- 节能改造激励措施 (节能总量尚未明确)
- 升级、继续推进并加大力度资助建筑节能改造项目
- 推广“合同能源管理”
- 国家既有供暖设施节能标签
- 德国复兴信贷银行节能项目升级
- 节能联盟倡议
- 针对非中小企业实施强制性能源审计
- 国家领跑者计划
- 实行节能项目竞争性招标机制
- 其他即时措施

通过上述措施，到2020年可额外节省能源350-380拍焦耳。



Stepping up energy efficiency in buildings, i.a.

- Continuation and upgrading (+200 million € p.a.) of **CO₂ Building Modernisation Programme** (extension to commercial buildings)
- Quality assurance and optimizing of **energy consultation** (e.g. on-site consultations with renovation roadmaps for phased renovations)
- Introduction of “**heating checks**” (using voluntary local heating checks whereby specialists [e.g. craftworkers or chimney sweeps] pinpoint weak points of existing heating systems)



加紧落实建筑节能

- 继续推进并加大投资（每年增加**2亿欧元**拨款）**建筑节能现代化改造项目**（扩展至商业建筑）
- 质量保证和**能源咨询**优化（例如：为分阶段改造项目提供改造路线图现场咨询）
- 推行“**供暖检查**”（通过自愿的局部供暖检查，让专家[例如技术人员或烟囱清扫工]准确定位现有供暖系统的薄弱环节



Competitive tendering scheme for energy efficiency

- Measures with the most economic cost-benefit ratio will be awarded
- Initial focus on electricity; first tendering procedure in 2016
- Measures on company/institution level as well as bundled projects
- **Open auctions** (technology neutral) plus **closed auctions** for specific technologies

The tendering scheme will motivate ESCOs, municipal utilities, energy cooperatives, manufacturers and others to identify economic ways to save energy.



节能项目竞争性招标机制

- 最经济、最具成本效益的措施将获授标
- 初期主要在电力行业推行；首次招标程序将于**2016**年启动
- 企业/机构层面以及捆绑项目的措施
- 公开拍卖（技术中立）与特定技术闭门拍卖相结合

招标机制将促使能源服务公司、市政公用事业机构、能源合作社、制造商等探索经济有效的节能方法。



Energy performance contracting

- **Public guarantees** for energy performance contracting projects (targeting default-risks)
- **Assistance to municipalities and public entities on local level** in making use of energy performance contracting as a means to achieve long-term energy expenditure reductions

NAPE aims at promoting the development of business models for energy savings.



合同能源管理

- 合同能源管理项目公共担保（针对违约风险）
- 协助地方政府和公共机构利用合同能源管理，作为减少能源开支的长效方法

国家节能行动计划旨在促进节能商业模式的开发。



Energy efficiency networks

- Regional best-practice exchange among 8-15 company practitioners in one network
- Networks aim on improving capacity within companies to plan and execute profitable investments in energy efficiency
- Pilot project with 30 networks (doubling of efficiency improvement compared to industry average)
- Goal of agreement between Federal Government and 20 industry and business associations: **500 networks until 2020**

EE networks are a suitable instrument for advancing a culture of energy efficiency in industry, commerce and trade.

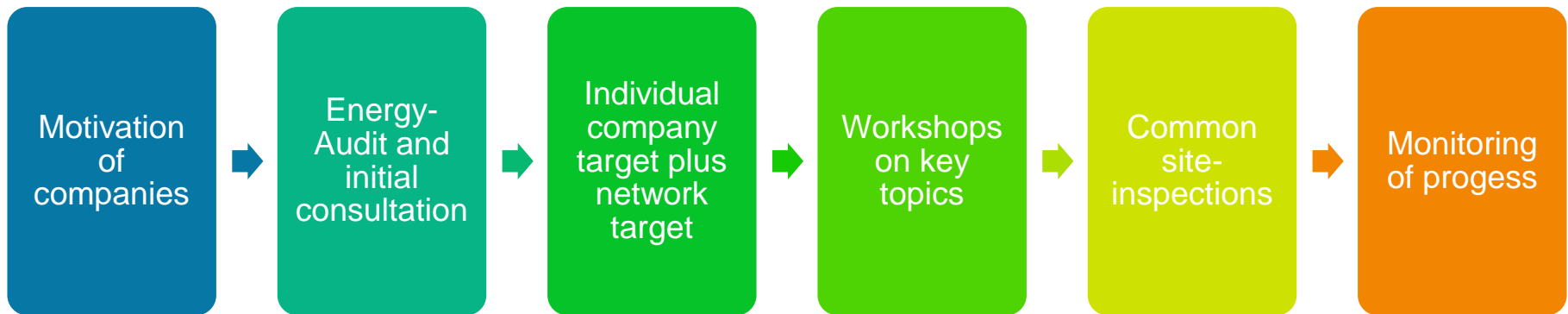


节能联盟

- 8-15家企业组建一个联盟，相互交流区域最佳实践
- 联盟旨在提升企业规划、实施经济可行的节能投资项目的能力
- 先组建30个联盟作为试点（与行业平均水平相比，能效提升一倍）
- 联邦政府与20家工商业协会达成的协议目标：**到2020年组建500个联盟**

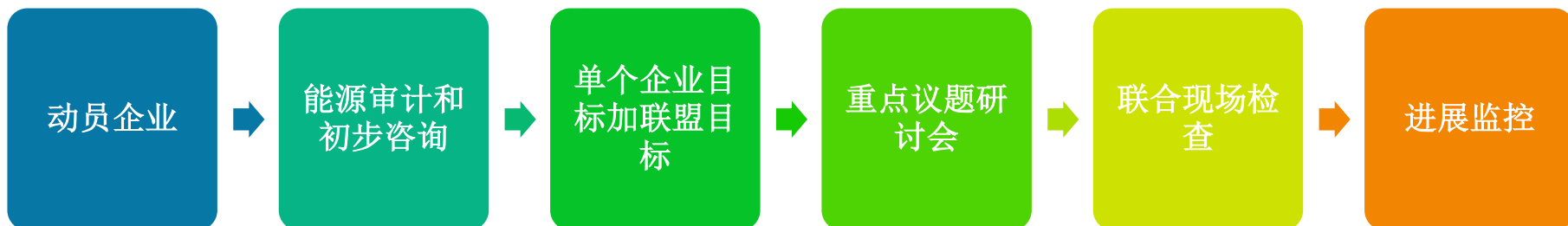
节能联盟是在工业、商业和贸易领域推广节能文化的合适工具。

Procedure of energy efficiency networks





节能联盟组建流程





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Thank you for your attention!



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感谢您的关注!