Achievements and challenges in improving energy efficiency in Poland

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NARODOWA AGENCJA POSZANOWANIA ENERGII S.A.

Set-up of the state support program in Poland – key roles and responsibilities

DONORS

State budget
Occasional - GEF

ENERGY AUDITORS

Check the requirements min. 25% heat use reduction

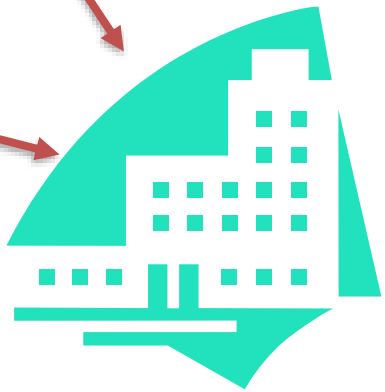
BGK
BANK GOSPODARSTWA KRAJOWEGO

OPERATING AGENT

CUSTOMERS

Grant to loan up to 16%-21% of total cost

COMMERCIAL BANKS



MFB
SFB
Heat sources

Loan to MFB owners with commercial interest to 100% of total cost

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Key results (1998-2020) 1€=4,4 PLN

Item	Figures
Number of multifamily buildings financed	**45 300 (March. 2020)**
Subsidies awarded value (total)	2,697 milliard PLN (0,612 milliard €)
Investment value (total) Leverage factor 6,5	13,162 milliard PLN (3,6 milliard €)
Subsidy per building (average)	59 536 PLN (13 531€)
Total investment value per building (average)	386 986 PLN (87 951€)
Yearly heat cost savings generated thanks subsidies (cummulated)	1,1 milliard PLN (0,25 milliard€)
Average heat demand reduction	36% (from sample)

Source of data: Bank Gospodarstwa Krajowego, own calculations

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Key results (1998-2020)

Item	Figures
Average interest rate of loans (2016)	4,28%
Market coverage in % of buildings eligible for program	12% (yearly 0,5-0,8%)

Source of data: Bank Gospodarstwa Krajowego, own calculations

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Key success factors

- Marketization of heat prices
- Lowering interest rates of loans
- Increase of creditworthiness of households and building`s owners (in large cities)
- Mobilization of professionals (energy auditors, facility managers, banks)
- Low interference by politics
- Strong promotion by all stakeholders, including manufactures of materials and equipment
- Corrective actions

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Creation of the state suport programm– justification

- Act of 1998
  - Reduction of heating cost underwritten by households by 30%-40%,
  - Improvement of technical standard of 50 000-100 000 buildings,
  - Reduction of energy intensity of budgetary sector (schools, hospital offices)
  - Increase of Energy security through saving of 7-14 million Mg of coal,
  - Reduction of green-house gases emission and other negative environmental impact,
  - Creation of several dozen of thousand of work places,
  - Facilitation social acceptance for marketization of energy prices

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Adjustment and improvement of the program

Thermomodernisation and Renovation Fund (2008-2020)

- the program provides a 16% subsidy to the loan+5 pp for installation of PV extended for owners of buildings (condominiums, co-operatives, private ones, public – municipally owned, special social purposes with not limited ownership) for up to 100% of total cost of thermal refurbishment measures
- the loan needs to cover at least 50% of total cost
- the precondition is to achieve energy savings through measures to be financed, at least 25% confirmed by the **energy audit**,
- in the case of **renovation** of buildings constructed before 1961 the subsidy accounts to 15% of total renovation cost, by minimum of 10% of energy savings, confirmed by **renovation audit,** renovation measures of common spaces, windows and balconies are also eligible; the **municipally** owned buildings may get to the loan 50% subisdy or 60% in case of historical prevention of the builidng

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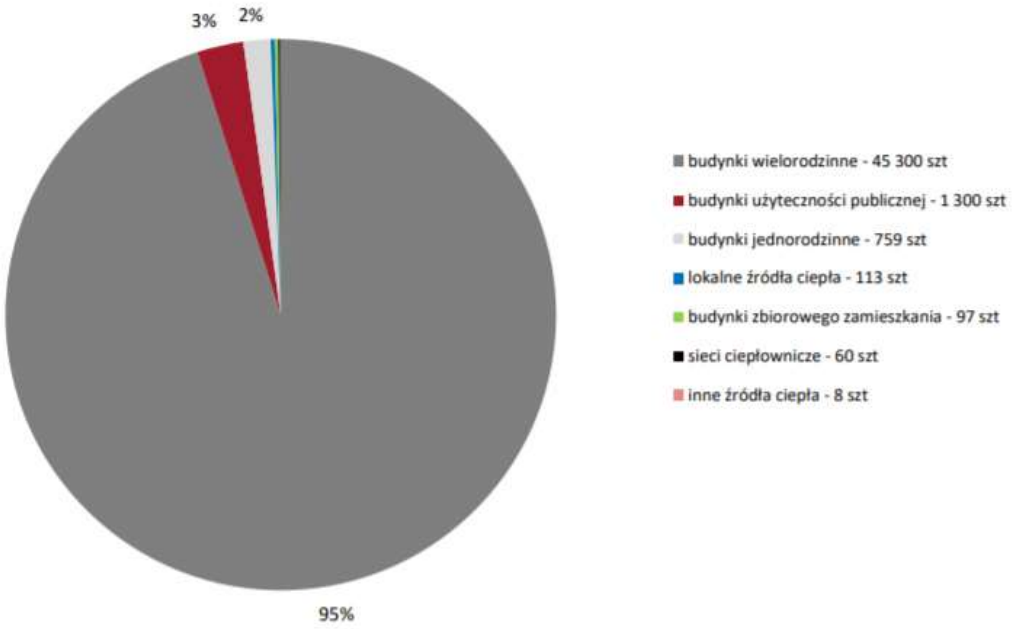
Utilisation of the Fund by categories of building owners

Struktura wniosków o premie (wszystkie rodzaje) wg typu modernizowanych obiektów w latach 1999 – I kw. 2020

BGK BANK GOSPODARSTWA KRAJOWEGO



PAŃSTWOWY BANK ROZWOJU

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Source: Bank Gospodarstwa Krajowego

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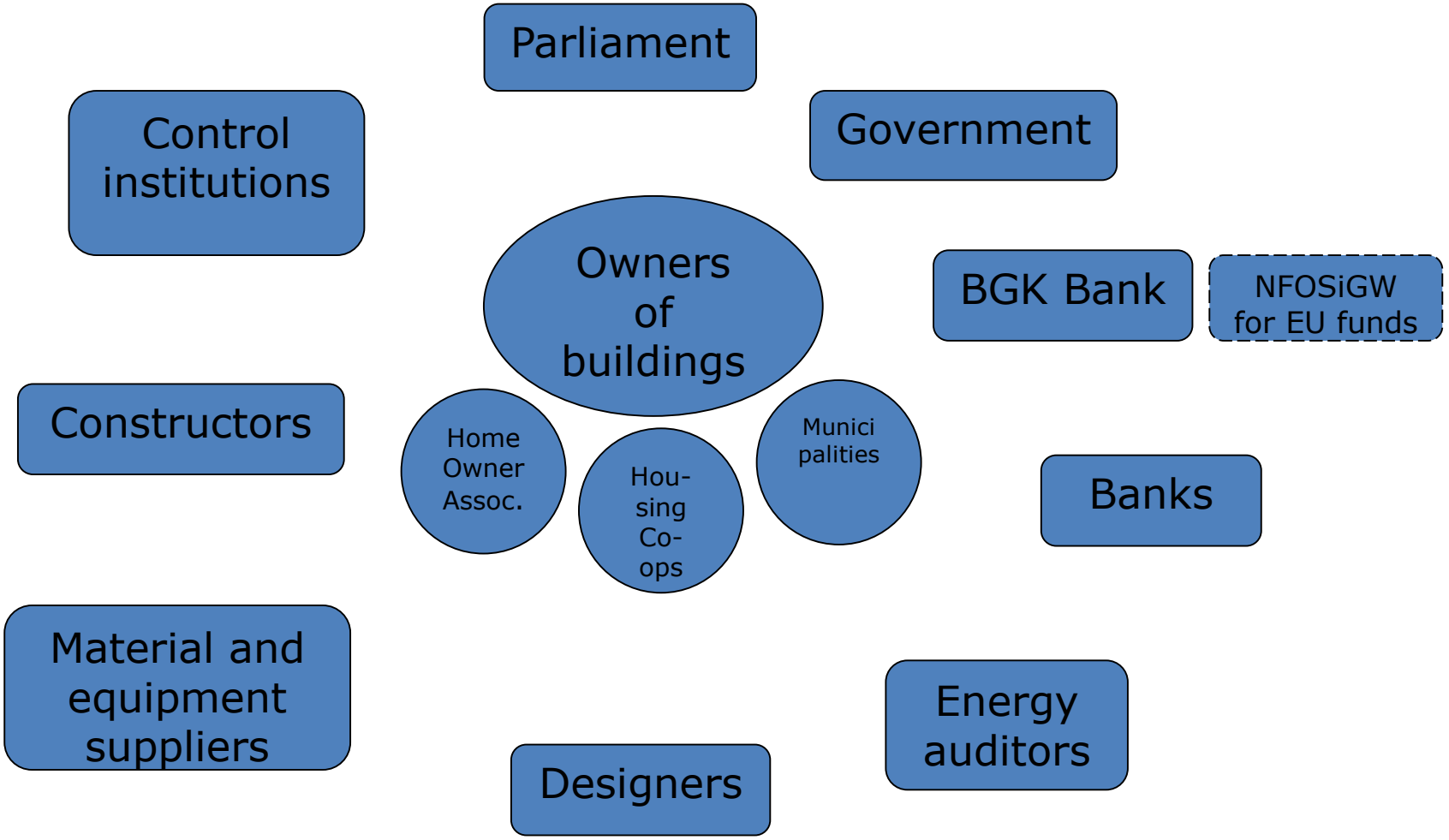
Main stakeholders of the program in Poland



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Operational setup

- concerning the subsidy – the BGK is solely responsible on verification of the energy audits, issuing the subsidy promises, transferring the subsidy to the banks, which concluded agreement with BGK
- BGK receives provision from beneficiary in amount of 0,6% of subsidy value
- there are only few persons employed for operation of the Fund, there is no supervisory board as it is a part of relevant department of BGK
- BGK selects the verifiers of energy audits every 2 years, cost of verification is covered by benficiary

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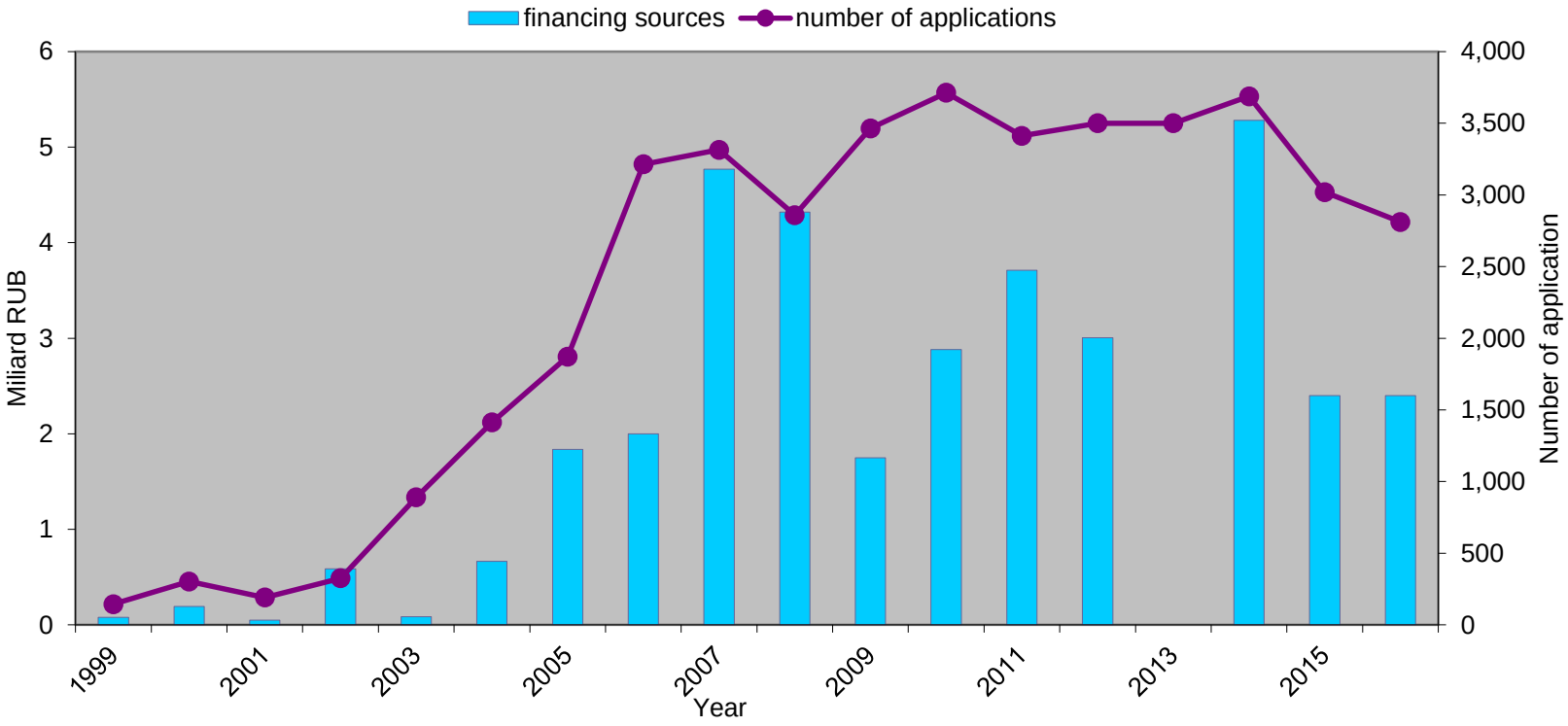
Utilisation of the fund 1999-2016

Budgetary sources and number of applications to the Thermomodernisation and Renovation Fund 1999-2016



Source: Bank Gospodarstwa Krajowego, own calculations

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Financial setup for Home Owner's Association

- What are the financial conditions for projects implementation?
  - creditworthiness of the legal owner of the building
  - confirmation of undertaking the project and of repayment of the loan by the legal representative of the dwelling owners – resolution by 50%+1 votes or over 50% of shares in ownership
  - proxy to the bank account of the legal owner of the building
  - signing the bank loan

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Operational set-up

- How the project`s implementation and results monitoring is organized?
  - the designer confirms implementation of measures according to the energy audit or in the renovation audit and technical documentation
  - the bank may do the cross-check of the same
  - energy savings results are not monitored, as they are calculated in the energy audit or in renovation audit
  - no ex post audit is required

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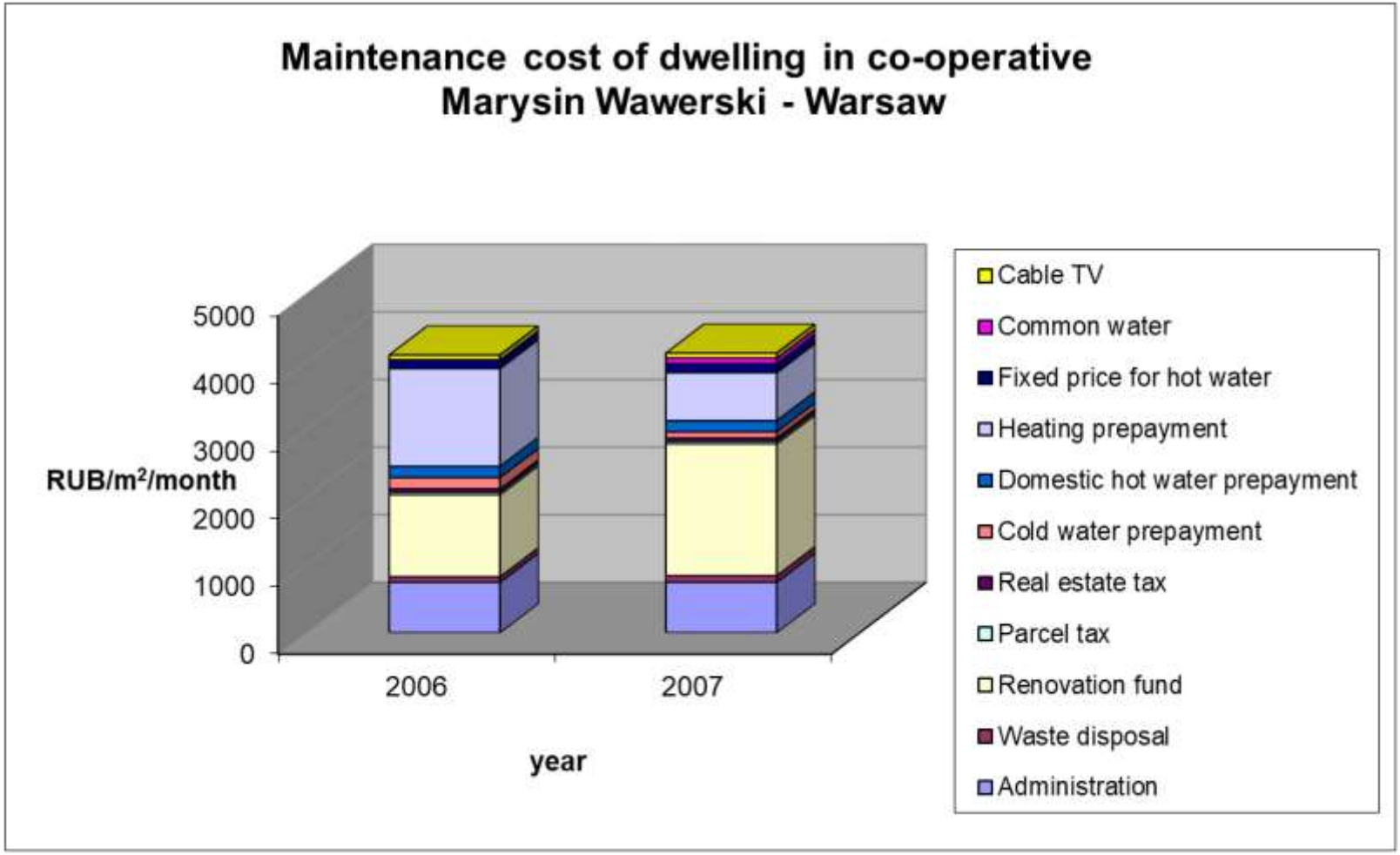
Internal source of financing – HOA, Housing Co-operative



Source of data: own calculations based on data provided by the SM Marysin Wawerski in Warsaw

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Verification procedures

1. Verification of the energy and renovation audits by BGK:
   - ✓ checking compliance with the Ordinance concerning the scope, form and procedure of the energy audit
   - ✓ checking accuracy of calculations
     - ✓ of heat demand before and after investment
     - ✓ within the acceptable correction factors set by the Ordinance concenring efficiency of heating system
   - ✓ <u>the real heat consumption is not subject of verification neither ex-ante nor ex-post</u>

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Verification procedures

2. Verification the quality of renovation works:
   - ✓ it is subject of permanent control by the independent supervisor of renovation and by designer
   - ✓ sample checks by bank inspectors

Verification procedures

3. When the construction works are finished, these documents are required:
   - finished „Construction book”
     - the “Construction book” is the document required by the Polish Construction Law, which is filled in by the Manager of Construction, the book contains description of the implementation of the works.
   - the confirmation of compatibility of works with energy audit and design
     - this confirmation has to be issued by a person, who has an appropriate function in the construction process (described by the construction law).

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The role of NAPE in putting in place a national system for EE retrofits of multi-family buildings

- Organising mid 90-ies a group of economic and technical experts from Technical Universities
- Studying foreign experience (especially from Denmark) and preparation of the Energy Audit methodology
- Convincing of Central Housing Office with the program idea=starting the Parliament processing of the Law 1996-1998
- Starting training for Energy Auditors (since 2002 the training is managed by the Energy Conservation Foundation) – in total over 3000 persons have been trained
- Drafting 1999 the by-laws about energy audits and their verification

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THANK YOU FOR YOUR ATTENTION !

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More Information

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