IFC International Finance Corporation
World Bank Group

Bioenergy development in Russia: barriers and opportunities (investment, policies, regional initiatives)

5 June 2012

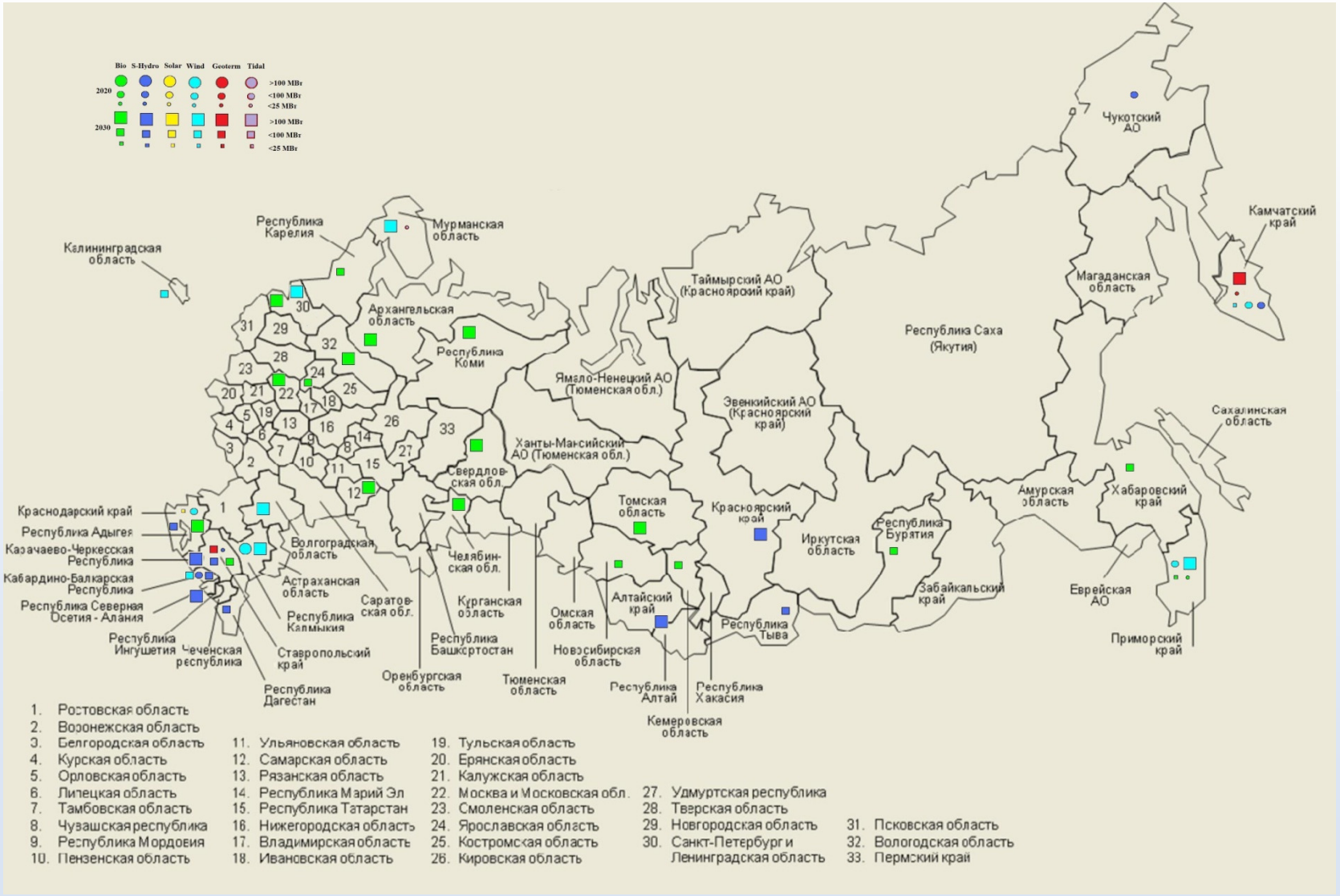
Anton V. Chernyshev
Russia Renewable Energy Program

В партнерстве с gef GLOBAL ENVIRONMENT FACILITY
INVESTING IN OUR PLANET

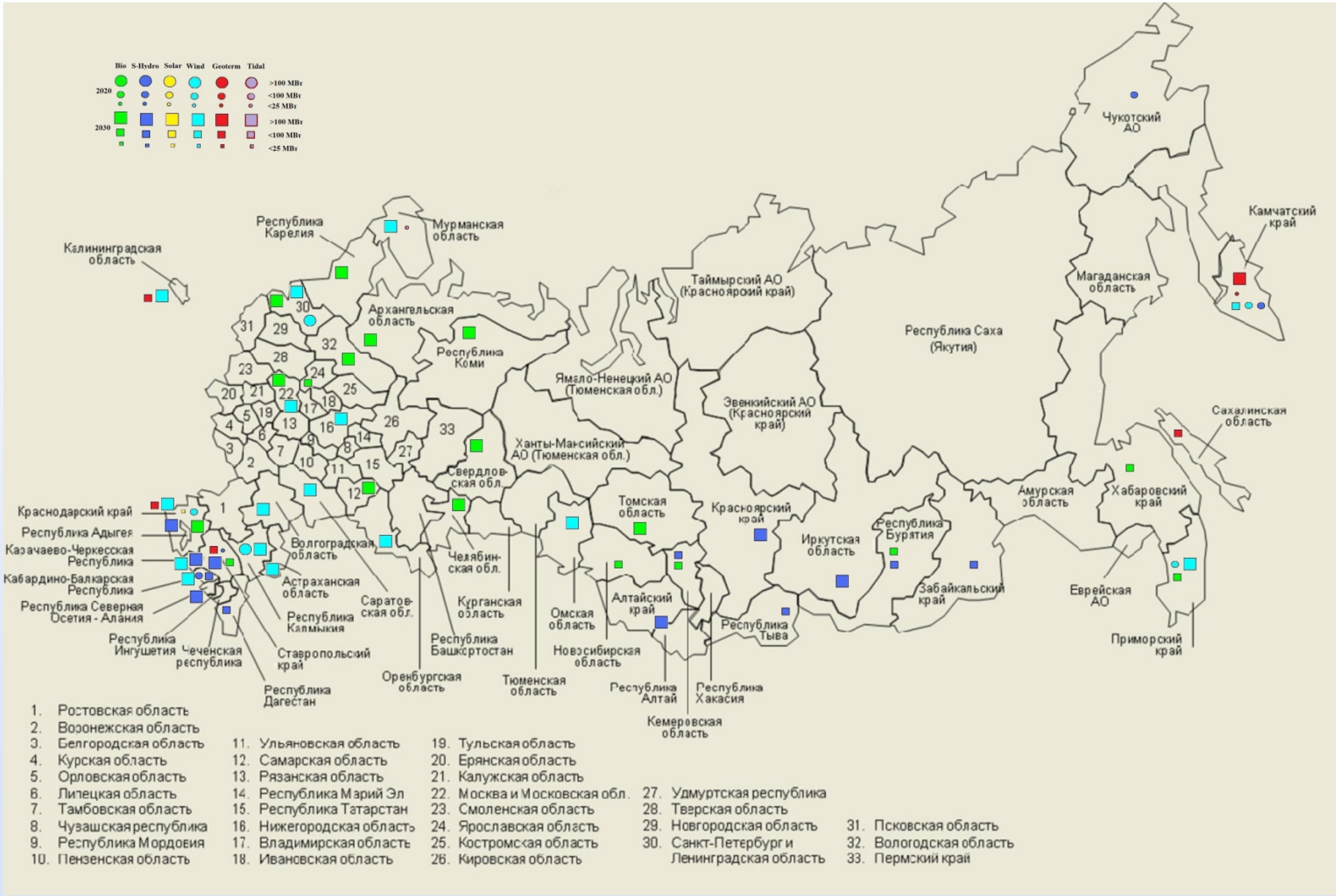
IFC Russia Renewable Energy Program

- Terms of the Program – 2010-2015
- Budget - $ 10 mln.
- Program objectives:
  - provide a sustainable market for renewable energy sources in the Russian Federation, support the development of necessary policies, market and financial mechanisms, institutional capacity building, and
  - sustainable direct GHG emission reduction.
- Expected impact of the Program:
  - Direct GHG emission reductions (CO2 eq) estimated at a cumulative **5 mln tons** over a 20 year investment lifetime;
  - **$366 mln** investments in RE projects;
  - Introduction of an enabling regulatory and incentive framework for renewable based power.

Basic RES scenario (APBE) for years 2020-2030



Maximum scenario RES (APBE) for years 2020-2030



Russian energy sector trends

Using renewable energy can already be an economically viable alternative to combat the trends listed below

1. Tariff growth for end consumer:
    - Fossil fuel price growth;
    - Modernization of unified energy system (DPM + grid);
    - ‘Imperfect’ legal and regulatory framework + effective generation shift to retail market;
    - Non-payers share increase.
2. Increase of cross-subsidies
3. Low fuel/resources diversification

RES and wholesale market

Reasons why federal RES support mechanism involving wholesale capacity or day ahead markets does not make much sense:

- Installed capacity of majority RES does not correspond to wholesale criteria (>5 (25) MWt);
- Interruptible RES cannot run System operator commands.

Regions want RES!

Some Russian regions attempted to introduce regional legislation to support RES (including retail market legislation):

1. Belgorod region
2. Tomsk region
3. Krasnodar krai
4. Archangelsk region
5. Amur region
6. Volgograd region

ПОСТАНОВЛЕНИЕ ПРАВИТЕЛЬСТВА БЕЛГОРОДСКОЙ ОБЛАСТИ от 8 июня 2009 г. № Белгород ОБ УТВЕРЖДЕНИИ КОНЦЕПЦИИ РАЗВИТИЯ БИОЭНЕРГЕ183-пп ТИКИ И БИОТЕХНОЛОГИЙ В БЕЛГОРОДСКОЙ ОБЛАСТИ НА 2009 - 2012 ГОДЫ.

Закон Томской области от 1 декабря 2000 г. N 55-ОЗ "Об использовании локальных нетрадиционных ВИЭ в Томской области" (принят постановлением Государственной Думы Томской области от 20 ноября 2000 г. N 679).

Закон Краснодарского края от 7 июня 2004 г. N 723-КЗ «Об использовании возобновляемых источников энергии в Краснодарском крае»

ПП Архангельской области № 176 – рр, от 31 мая 2011 года «О внесении изменений в долгосрочную целевую программу …» - перевод котельных на биомассу

Закон Амурской области от 14 марта 2005 г. N 451-ОЗ "О развитии нетрадиционных возобновляемых источников энергии в Амурской области" (Принят областным Советом народных депутатов 24 февраля 2005 года).

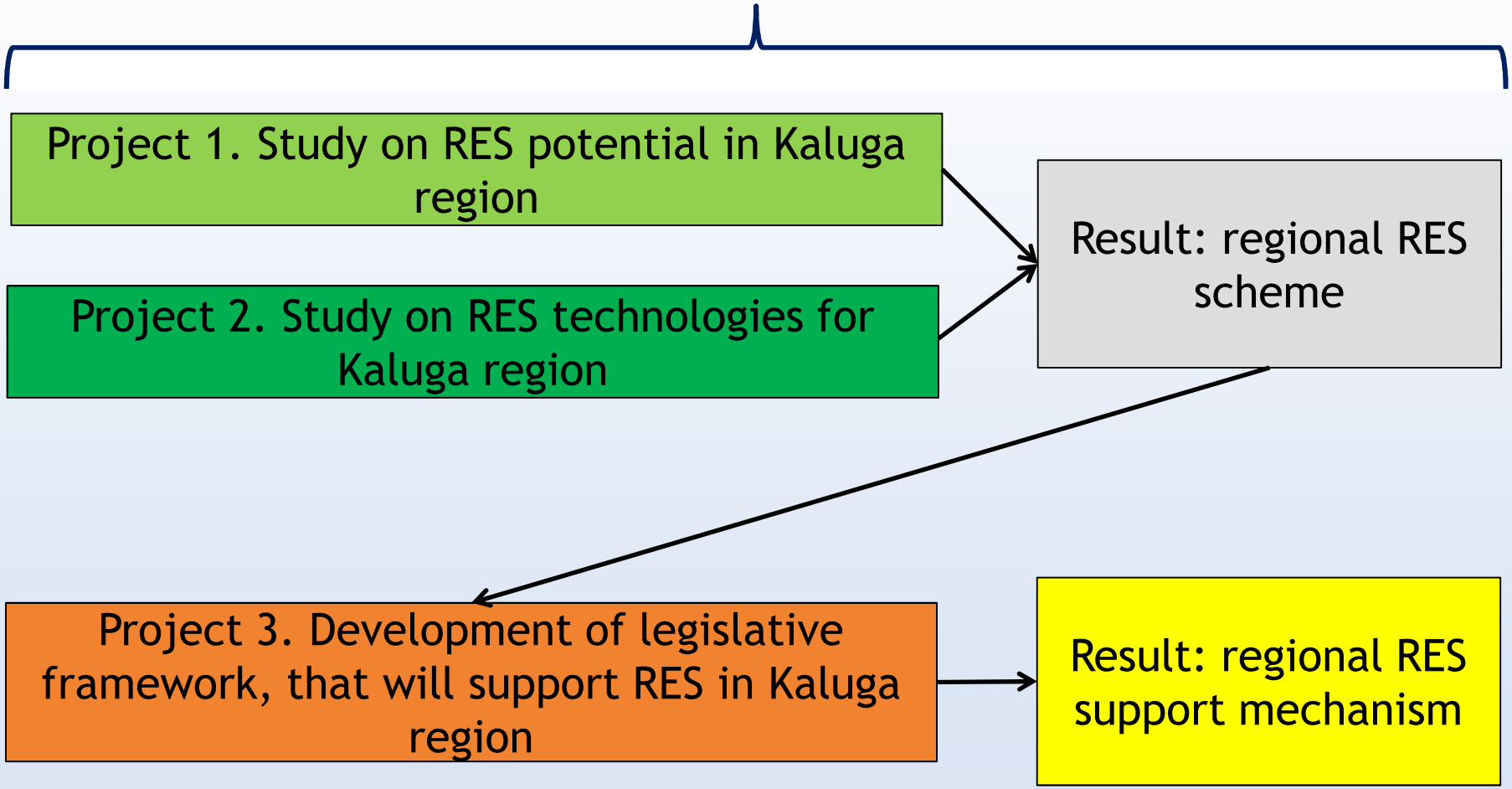
Распоряжение Администрации Волгоградской области от 5 января 1995 г. N 10-р "О конкурсе по выбору источника альтернативной энергетики".

IFC's suggestions for RES development acceleration

- RES qualification credentials should be transferred from federal level to regional;
- Tariffs for RES should be introduced not only to compensate transmission losses;
- To ensure, that economically justified tariffs for RES projects developed in accordance with regional energy saving and energy efficiency programs are introduced;
- Long term tariff guarantees – direct reference in Federal legislation needed;

Regional RES support scheme development stages for Kaluga region

Cooperation Agreement between IFC and Kaluga region (3 Feb 2012)



Regional RES support scheme (Kaluga)

Why regional RES scheme is so important?

- Cost of RES support measures should be determined – electricity and heat tariff change for end-consumer should be predictable in the region;

- Elimination of projects that are not economically justified;

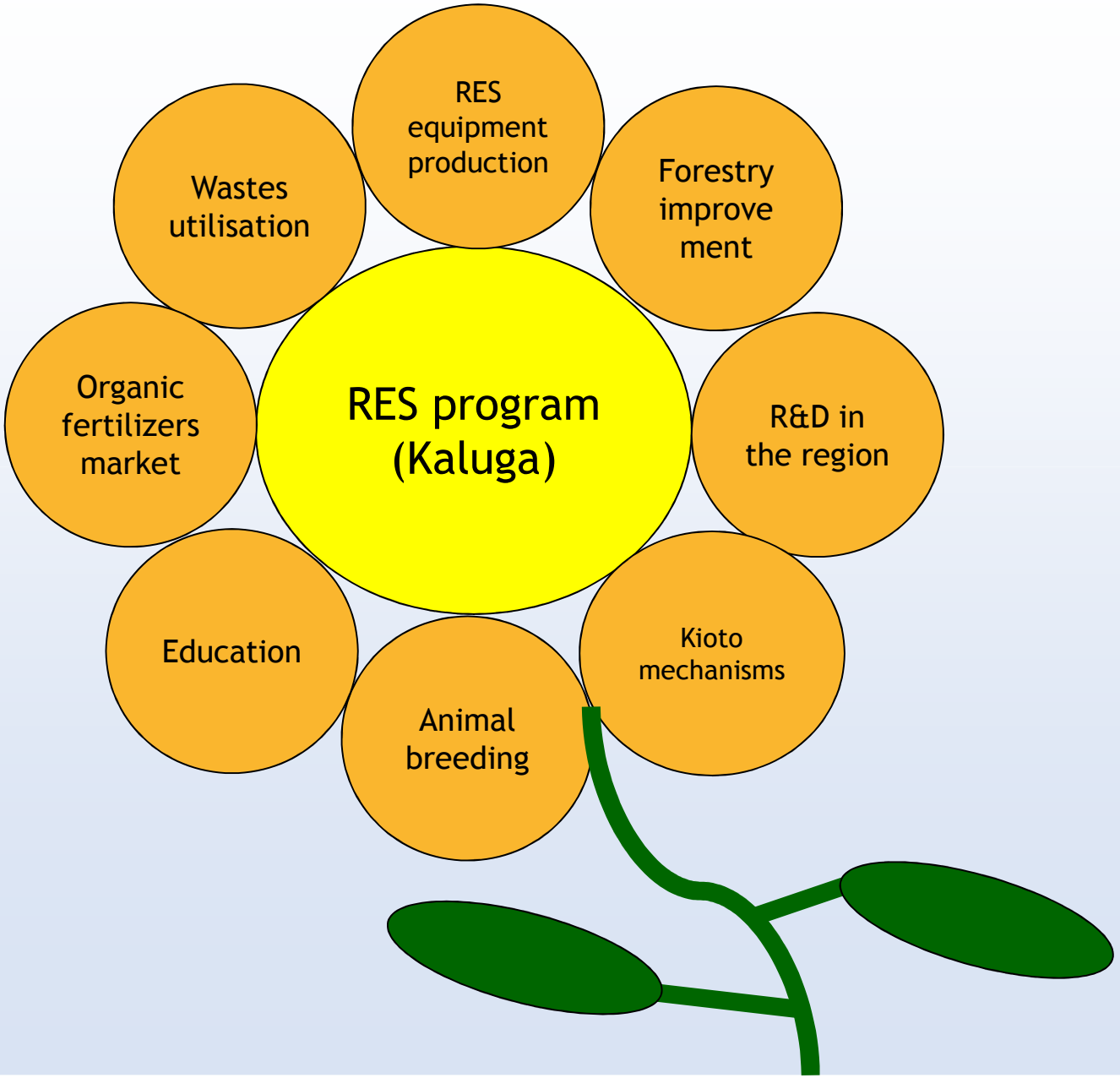
- Creating a unified approach to the technical implementation of RES projects;

- Identify criteria for economic justification of investments in renewable energy projects in the region.

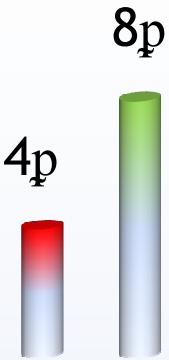
Regional RES support scheme (Kaluga)

- Regional methodology for economically justified tariff calculation for RES installations;
- Legal system of RES electricity sales contracts;
- Wastes supply guarantees;
- Grid connection issues;
- Customs legislation;
- Compensation of credit interest rates

Regional RES support scheme catalyses inter-sector synergy



Biogas projects support «Subsidy»



Electricity production



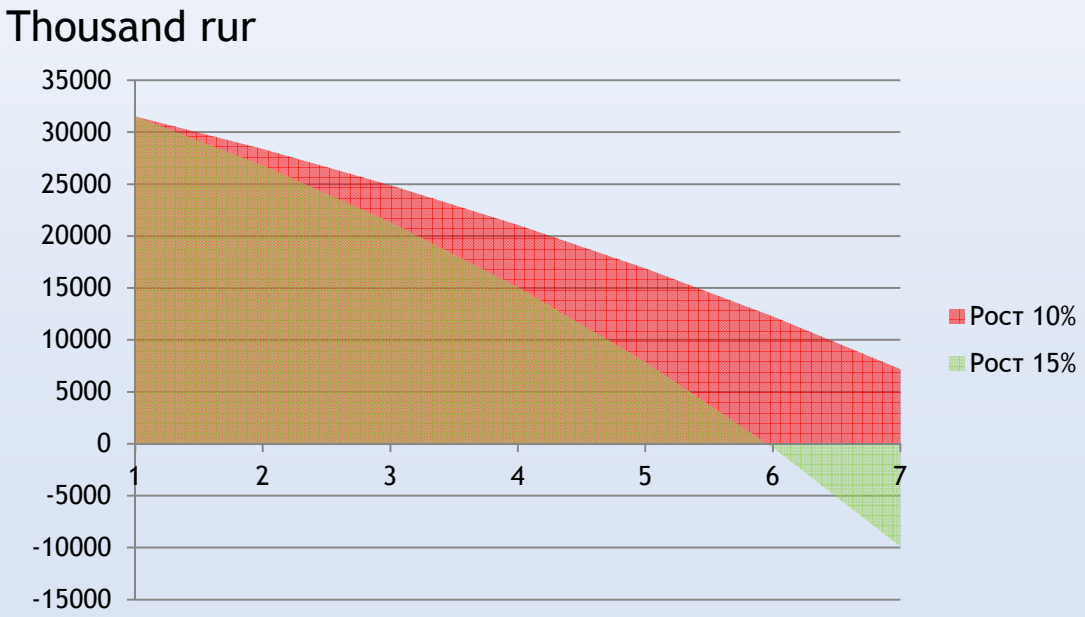
Subsidy~ 31 mln. Rur



1 MWt

Graph:

- Capacity usage – 90%
- Subsidy - **31** mln rur
- After 7 years at 10% tariff growth subsidy per 1 MWt – 6 mln. rur
- After 7 years at 15% tariff growth subsidy per 1 MWt – minus 7.2 mln. rur



What can biogas subsidy mean?

- Biogas cluster subsidy can be interpreted as agriculture industry subsidy from Government (payment for proper hazardous wastes utilization);
- Government Decree ПП РФ N 344 «О нормативах платы за выбросы…» regulatory penalties for the placement of a tonne of waste hazard class III (e.g., pigs manure, poultry manure) is 497 RUR (there are plans to increase);
- The biogas plant of 1 MW per year recycles about 40,000 tons of organic wastes. Payment for the appropriate utilization of wastes is about 20 million RUR.

Pilot regions

At the moment, the signing of similar agreements being discussed with the following regions:

- Archangelsk region
- Kamchatkij krai
- Nizhny Novgorod region
- Belgorod region
- Tomsk region
- Krasnodar krai

Thank you for attention!

Questions?