

## NATIONAL ENERGY PLAN 2050 (PNE IN PORTUGUESE)

LADIES AND GENTLEMEN,

**BRAZIL'S ENERGY PUBLIC POLICIES ARE GUIDED BY TWO MAJOR PLANS.** IT IS A GREAT PLEASURE TO BE HERE AND TO BE ABLE TO PRESENT TO YOU AT FIRST-HAND THE MAIN GUIDELINES AND RECOMMENDATIONS OF BRAZIL'S NATIONAL ENERGY PLAN 2050, (PNE 2050). IN THIS CONTEXT, LET ME ACKNOWLEDGE THE IMPORTANCE OF THE COOPERATION BETWEEN BRAZIL'S ENERGY PLANNING UNITS AND THE INTERNATIONAL ENERGY AGENCY NOT ONLY FOR THE DESIGNING OF THIS PLAN BUT ALSO FOR THE OTHER STRATEGIES RELATED TO MY PORTFOLIO AS MINISTER OF MINES AND ENERGY. MY PRESENCE HERE IS PROOF OF THE GREAT IMPORTANCE WE ATTACH TO THIS PARTNERSHIP WITH IEA.

THE NATIONAL ENERGY PLAN 2050 IS A SET OF STUDIES THAT SUPPORT THE DESIGN OF THE BRAZILIAN GOVERNMENT'S LONG-TERM STRATEGY FOR EXPANDING THE ENERGY SECTOR. THE STRATEGY, IN TURN, CONSISTS OF A SET OF RECOMMENDATIONS AND GUIDELINES TO BE FOLLOWED AND DEFINING THE ACTIONS AND INITIATIVES TO BE IMPLEMENTED ALONG THE NEXT 30 YEARS.

IN THIS SENSE, PNE 2050 IS A PROCESS DIVIDED INTO 3 STEPS: FIRSTLY, THE STRATEGY DESIGN, SECONDLY, THE IMPLEMENTATION OF THE STRATEGY, TO BE ESTABLISHED IN THE ACTION PLAN AND, FINALLY, THE MONITORING OF THE EFFECTS AND DEVELOPMENTS ADOPTED THROUGH A STRATEGIC ACTIONS MONITORING PLAN.

THE REVIEW OF THE PLAN SHOULD NATURALLY HAPPEN ONLY WHENEVER THE MAIN CONSTRAINTS CHANGE TO THE POINT WHERE A REVISION OF THE LONG-TERM STRATEGY IS NECESSARY. HOWEVER WE UNDERSTAND THAT A CHANGE OF GOVERNMENT COULD BRING NEW PRIORITIES AND A NEW VISION. IN THIS SENSE, PNE REVISIONS WILL OCCUR ON AN ORDINARY BASIS EVERY 4 YEARS OR EXTRAORDINARILY, WHENEVER AN IMPORTANT CONSTRAINT CHANGES THE CURRENT PNE'S FUTURE VISION.

IN A NUTSHELL, IN CONTRAST WITH OUR TEN-YEAR ENERGY PLAN (PDE) THAT'S REVIEWED YEARLY, ALSO TO BE PUBLISHED THIS MONTH (DECEMBER), THE PNE FOCUSES LESS ON WHAT OUR ENERGY MATRIX WILL LOOK LIKE IN 2050 AND MORE ON WHAT ARE THE STEPS THAT NEED TO BE TAKEN IN THE NEXT DECADES SO WE CAN REACH OUR GOALS IN THE ENERGY SECTOR, ACCORDING TO THE ESTIMATES OF ECONOMIC GROWTH.

AND IN ORDER TO MEET THE GROWING NEEDS OF ENERGY PROJECTED FOR THE BRAZILIAN ECONOMY IN THE NEXT DECADES, WE WILL CONTINUE TO INVEST IN FOUR MAIN AREAS: RENEWABLES, BIOFUELS, NUCLEAR ENERGY AND OIL AND GAS

LET ME NOW SAY A FEW WORDS ABOUT RENEWABLES.

BRAZIL CURRENTLY HAS ONE OF THE MATRIXES WITH THE HIGHEST LEVEL OF RENEWABLE SOURCES PARTICIPATION IN THE WORLD. ACTUALLY, 44% OF THE BRAZILIAN ENERGY MATRIX IS COMPOSED OF RENEWABLE SOURCES AND 85% OF THE ELECTRICAL MATRIX IS CLEAN ENERGY-BASED.

WE HAVE APPROXIMATELY 108 GW OF HYDROPOWER INSTALLED, WHICH CORRESPONDS TO ALMOST 2/3 OF THE TOTAL CAPACITY. WIND AND SOLAR SOURCES TOGETHER MAKE UP 10% OF INSTALLED CAPACITY. AND MORE IMPORTANT, BRAZIL IS IN A POSITION TO CONTINUE TO MEET THE GROWTH IN ENERGY DEMAND AND THUS ENSURE ECONOMIC GROWTH WITHOUT COMPROMISING ITS ENVIRONMENTAL SUSTAINABILITY.

ALTHOUGH EXPANSION OF HYDROELECTRIC GENERATION IS NEAR ITS LIMIT, WIND AND SOLAR SOURCES SHOULD GAIN SIGNIFICANT SPACE, SINCE BOTH HAVE REACHED CONSIDERABLE COST REDUCTION GAINS THROUGH TECHNOLOGICAL ADVANCES MOSTLY.

WE CAN ALSO EXPECT MORE INVESTMENTS IN RESEARCH AND DEVELOPMENT OF STORAGE TECHNOLOGIES THAT WILL COUNTERBALANCE THE INTERMITTANCE OF THE RENEWABLE SOURCES. MOREOVER, WE PLAN TO INVEST IN PROJECTS THAT WILL COMBINE DIFFERENT RENEWABLES WITH BASE-LOAD SOURCES, TAKING ADVANTAGE BOTH OF OUR NATURAL GAS RESERVES AND NUCLEAR POTENTIAL.

ON ANOTHER DIMENSION, THE EVER-GROWING USE OF BIOFUELS WILL BE A CENTRAL TOOL TO KEEP IT LOW OR EVEN REDUCE GREEN-HOUSE GAS EMISSIONS.

IN THIS SENSE, BRAZIL HAS LAUNCHED THE LARGEST ENERGY TRANSITION POLICY IN THE WORLD: RENOVABIO. BY 2029, WE WILL HAVE OFFSET GREENHOUSE GAS EMISSIONS THAT REPRESENT THE PLANTATION OF FIVE BILLION TREES USING BIOFUELS. THIS AMOUNT CORRESPONDS TO ALL EXISTING TREES IN DENMARK, IRELAND, BELGIUM, THE NETHERLANDS AND THE UNITED KINGDOM COMBINED.

I AM PROUD TO SAY THAT RENOVABIO REPRESENTS OUR BRAZILIAN CARBON-CAPTURE MACHINE.

WE ALSO PLAN TO CONTINUE TO INVEST IN ANOTHER CLEAN ENERGY SOURCE, NUCLEAR ENERGY. IN FACT, PRESIDENT BOLSONARO DECIDED TO MAKE OF NUCLEAR ENERGY ONE OF THE PRIORITIES OF HIS GOVERNMENT.

AND BRAZIL HAS SOME VERY IMPORTANT ADVANTAGES IN THIS SPHERE. WE MASTER THE FULL NUCLEAR FUEL CYCLE. WE HAVE THE SEVENTH LARGEST WORLD URANIUM RESERVES, WITH ONLY 30% OF OUR TERRITORY PROSPECTED. AND WE HAVE BEEN OPERATING SUCCESSFULLY TWO NUCLEAR PLANTS FOR OVER 30 YEARS NOW.

SO WE CAN EXPECT THAT THE NATIONAL ENERGY PLAN WILL RECOMMEND THAT INVESTMENTS IN THE CONSTRUCTION OF NEW NUCLEAR PLANTS BE MADE.

ALSO WE CAN EXPECT TO RESUME EXPLORATION OF URANIUM RESERVES NATIONWIDE. BRAZIL CAN BECOME A REAL INTERNATIONAL PLAYER IN THE NUCLEAR FUEL MARKET.

A LAST WORD GOES TO THE OIL AND GAS SECTOR. THE EXPLOITATION OF OIL AND GAS RESOURCES AS WE ALL KNOW IS NOT INCOMPATIBLE WITH THE ENERGY TRANSITION EFFORTS THAT WE ARE ALL ENGAGED WITH.



THE OIL AND GAS SECTOR IN BRAZIL IS UNDERGOING AN IMPORTANT OPENING REFORM, OFFERING SEVERAL OPPORTUNITIES, BEARING IN MIND THAT WE HAVE THE MOST PRODUCTIVE WELLS IN THE WORLD, IN THE PRE-SALT AREA. BY 2040, WE WILL HAVE DOUBLED CURRENT OIL RESERVES, REACHING 25 BILLION BARRELS; INVESTMENTS IN THE ORDER OF US\$ 460 BILLION WILL BE NEEDED; AND BRAZIL WILL BECOME ONE OF THE FIVE LARGEST PRODUCERS IN THE WORLD.

IN THE NATURAL GAS SECTOR, WE ARE CURRENTLY DEVELOPING THE “NEW GAS MARKET” POLICY, TO BUILD UP AN OPEN, DYNAMIC AND COMPETITIVE NATURAL GAS MARKET, FOUNDED ON THE PILLARS OF COMPETITION, INTEGRATION BETWEEN GAS AND POWER SECTORS, HARMONIC LOCAL AND FEDERAL REGULATORY FRAMEWORKS, AND REMOVAL OF TAX BARRIERS. GAS WILL BECOME AN IMPORTANT BASE-LOAD SOURCE TO BOOST BRAZIL’S REINDUSTRIALIZATION EFFORTS.

LADIES AND GENTLEMEN,

LET ME CONCLUDE MY REMARKS BY REITERATING BRAZIL'S FIRM COMMITMENT TO ENERGY TRANSITION TO AN EVEN LOWER-CARBON ECONOMY MODEL. WE HAVE MADE THIS CHOICE MANY DECADES AGO, WHEN WE DECIDED TO INVEST IN HYDRO (ITAIPU), NUCLEAR (ANGRA 1 AND 2) AND BIOFUELS (PROALCOOL). PLEASE, BE SURE THAT IT CONTINUES TO BE OUR INTENT TO FOLLOW THIS PATH AND CONTRIBUTE TO REDUCE GREEN-HOUSE GAS EMISSIONS.

THANK YOU!