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DEPUTY MINISTER OF SCIENCE, TECHNOLOGY AND  
INNOVATION (MOSTI) MALAYSIA**

**“THE MALAYSIAN APPROACH TOWARDS RENEWABLE  
ENERGY – TAPPING OOPORTUNITIES”**

**AT THE LAUNCH OF  
THE NATIONAL RENEWABLE ENERGY SUMMIT 2009  
(REneW09)  
GRAND MARGHERITA HOTEL, KUCHING  
TUESDAY , 18 AUGUST 2009**

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**YBHG. DATUK HJH. JAMALIAH KAMIS,  
CHAIRMAN SIRIM BERHAD**

**YBHG. IR. HJ. YAHAYA AHMAD,  
PRESIDENT & CHIEF EXECUTIVE OF SIRIM BERHAD**

**DISTINGUISHED SPEAKERS ,**

**PARTICIPANTS OF RENEW SUMMIT ,**

**LADIES AND GENTLEMEN ,**

A VERY GOOD MORNING TO EVERYONE PRESENT HERE TODAY . FIRSTLY , ALLOW ME TO CONVEY MY DEEPEST APPRECIATION TO THE ORGANIZER , SIRIM BERHAD FOR INVITING ME TO LAUNCH THE NATIONAL RENEWABLE ENERGY SUMMIT 2009 (REneW09) .

IT ALSO GIVES ME GREAT PLEASURE IN WELCOMING ALL THE PARTICIPANTS OF THIS SUMMIT . I AM INDEED HAPPY THAT YOU ARE HERE TO PARTICIPATE IN THIS EVENT , A PROGRAMME THAT IS IMPORTANT IN CHARTING THE PATH FOR RESEARCH , TECHNOLOGY AND COMMERCIALIZATION IN THE RENEWABLE ENERGY SECTOR IN MALAYSIA . THE IDEA TO HOLD THIS SUMMIT IN KUCHING IS TIMELY AND AUGURS WELL AS SARAWAK IS THE HOME OF S.C.O.R.E. , THE SARAWAK CORRIDOR OF RENEWABLE ENERGY .

**LADIES & GENTLEMEN ,**

UNDENIABLY , THE ENERGY SECTOR PLAYS A VITAL ROLE IN THE ECONOMIC DEVELOPMENT AND GROWTH OF OUR COUNTRY . TAKING ELECTRICITY AS AN EXAMPLE , THE CONSUMPTION HAS INCREASED FROM 20,000GWH (GIGA WATT HOURS) IN 1990 TO 87,000GWH IN 2007 , AN INCREASE OF MORE THAN 4 TIMES IN 17 YEARS . AS A

MATTER OF FACT , THE PERIOD FROM 1990 TO 2000 SAW A SPECTACULAR ECONOMIC GROWTH DURING WHICH THE DEMAND FOR ELECTRICITY RECORDED DOUBLE DIGIT GROWTH .

MALAYSIA , A MEMBER OF THE WORLD'S OPEN MARKET , RELIES HEAVILY ON THE GLOBAL ECONOMY , WHERE GROWTH IS DEPENDENT ON EXTERNAL MACRO-ECONOMIC FACTORS . FOR EXAMPLE , THE RECENT GLOBAL ECONOMIC SLOW-DOWN , GEOPOLITICAL TENSIONS AND SECURITY THREATS TIME AND AGAIN HAS CAUSED FUEL PRICE VOLATILITY AND SUPPLY RISKS . THEREFORE , IT IS IMPORTANT THAT A RENEWABLE , CLEAN , EFFICIENT , RELIABLE AND ECONOMICAL SUPPLY CHAIN OF ENERGY BE EXPLORED AND SUSTAINED INTO THE FUTURE OF MALAYSIA .

TOWARDS THIS END , RESEARCH AND DEVELOPMENT ON RENEWABLE ENERGY (R.E.) BEING ONE OF THE FOCUS OF MOSTI WHERE A TASK FORCE ON RENEWABLE ENERGY , CHAIRED BY MYSELF WAS SET-UP . CONFERENCES AND SUMMITS SUCH AS THIS WILL CERTAINLY HELP THE GOVERNMENT IN FURTHER PROMOTING AND DEVELOPING THE INDUSTRY .

AS SUCH , R&D IN THIS FIELD BEING IMPLEMENTED BY MOSTI'S AGENCIES SUCH AS SIRIM , NUCLEAR MALAYSIA , RESEARCH INSTITUTIONS AND UNIVERSITIES , CARRYING OUT PROJECTS RELATED TO THE DEVELOPMENT AND APPLICATION OF R.E. ARE FUNDED BY VARIOUS SCHEMES UNDER MOSTI .

FURTHERMORE , WITH THE ESTABLISHMENT OF THE NATIONAL RENEWABLE ENERGY TASKFORCE BY MOSTI , IT IS HOPED THAT MALAYSIA WILL SOON HAVE ITS OWN VIABLE RENEWABLE ENERGY PROJECTS ON A COMMERCIAL BASIS . THROUGH SUCCESSFUL COMMERCIALIZATION OF PROJECTS UNDER THE RESEARCH AND TECHNOLOGY PROGRAMMES IN PLACE , WE CAN THEN TAKE ADVANTAGE OF THE COUNTRY'S RICH NATURAL RESOURCES AND AT THE SAME TIME , REDUCE CARBON EMISSION .

THE TASKFORCE IS ALSO MANDATED TO IDENTIFY AND DEVELOP RENEWABLE ENERGY TECHNOLOGIES FROM LOCAL NATURAL RESOURCES FOR A SUSTAINABLE RENEWABLE ENERGY PROGRAMME .

APART FROM THAT , THE TASKFORCE WILL ALSO IDENTIFY PROJECTS AND PLAYERS IN AND FROM OUTSIDE THE COUNTRY WHO CAN ASSIST IN THE DEVELOPMENT OF THESE R.E. TECHNOLOGIES SO THAT THEY CAN BE SUCCESSFULLY COMMERCIALISED .

**LADIES & GENTLEMEN ,**

FOR YOUR INFORMATION , SIRIM HAS SEVERAL COMMENDABLE RENEWABLE ENERGY PROJECTS IN THE OFFING , AMOUNTING TO A TOTAL VALUE OF RM11 MILLION . AMONG THEM ARE :

- PHOTOCATALYTICS OR SOLAR DETOXIFICATION PROCESS FOR TREATING PESTICIDE-CONTAMINATED GROUND WATER IN CAMERON HIGHLANDS ;
- NOVEL BIOREACTOR FOR METHANE GAS GENERATION FOR VEHICLES USING PALM OIL SLUDGE IN CAREY ISLAND , SELANGOR ;
- BIO-ETHANOL FROM VARIOUS OIL PALM BIOMASS RESIDUES INCLUDING E.F.B OR EMPTY FRUIT BUNCHES , VIA MECHANO-ENZYMATIC PROCESS OF LIGNOCELLULOSE ;

- BIO-DIESEL FROM A NATIONAL PILOT PROJECT ON JATHROPA OIL PRODUCED FROM THE FARMS HERE IN SARAWAK ; AND
- WIND AND TIDAL ENERGY FARMS IN SABAH TO GENERATE ELECTICITY ESPECIALLY FOR REMOTE RURAL COMMUNITIES NEAR COASTAL AREAS .

CONCURRENTLY , SIRIM RESEARCHERS ARE ALSO EXPLORING CONVENTIONAL SOLAR THERMAL ENERGY , WHERE THE SUN'S HEAT IS USED IN AGRICULTURAL AND INDUSTRIAL DRYING AS WELL AS RESEARCH IN PHOTOVOLTAIC SOLAR ENERGY .

I HOPE WITH ALL THESE RESEARCH PROGRAMMES IN PLACE , MOSTI'S RENEWABLE ENERGY PROGRAMMES WILL BE ABLE TO CREATE NEW SOURCES OF WEALTH AND SOCIETAL WELL-BEING ON A SUSTAINABLE BASIS .

**LADIES & GENTLEMEN ,**

TODAY , GREATER EFFORTS MUST BE UNDERTAKEN TO ENCOURAGE THE UTILIZATION OF RENEWABLE RESOURCES , SUCH AS BIOMASS , BIOGAS , SOLAR AND

MICRO AND MINI-HYDRO FOR ELECTRICITY GENERATION IN OUR COUNTRY WHICH I BELIEVE IS CRUCIAL TO THE WORLD'S SUSTAINABILITY .

AT PRESENT , THE ENERGY WE USE COMES MAINLY FROM NON-RENEWABLE SOURCES SUCH AS COAL , PETROLEUM OIL , AND NATURAL GAS , ALL OF WHICH ARE FINITE RESOURCES OFTEN REFERRED TO AS PRIMARY FUELS WHICH WILL BE DEPLETED IN DUE COURSE . ADDITIONALLY , THE USE OF THESE PRIMARY FUEL ARE DAMAGING NOT JUST TO OUR HEALTH BUT TO THE ENVIRONMENT DUE TO THE EMISSION OF CARBON DIOXIDE , CARBON MONOXIDE , SULPHUR OXIDE AND NITROUS OXIDE , WHICH COLLECTIVELY MAKE UP THE GREEN HOUSE GASES OR GHG . THIS IN TURN WILL LEAD TO THE ESCALATING CONCERN OF GLOBAL WARMING AND CLIMATE CHANGE .

SUBSEQUENTLY , THE CONCENTRATION OF CARBON DIOXIDE IN THE ATMOSPHERE HAS INCREASED FROM 280PPM DURING THE PRE-INDUSTRIALIZATION ERA TO 380PPM PRESENTLY . UNLESS WE DEVELOP THE R.E. SECTOR , THE USE OF PRIMARY FUELS WILL CONTINUE TO REMAIN AS THE MAJOR SOURCES OF FUEL TO KEEP UP

WITH THE ENERGY DEMAND FOR INDUSTRIES WORLD-WIDE WITH WILL FURTHER DEGRADE THE ENVIRONMENT .

THUS , MALAYSIA AS AN OIL-EXPORTING COUNTRY , IS AWARE OF THE IMPORTANCE TO CONSERVE OUR OIL AND GAS RESERVES FOR LONG TERM UTILIZATION AND AT THE SAME TIME , INTENSIFY THE EXPLORATION AND DEVELOPMENT OF ALTERNATIVE AND SUSTAINABLE ENERGY SOURCES . CONSEQUENTLY , THE MALAYSIAN 5<sup>TH</sup> FUEL POLICY WAS FORMULATED UNDER THE 8<sup>TH</sup> MALAYSIAN PLAN TO PROMOTE RENEWABLE ENERGY , WHICH ENCOURAGED THE PRODUCTION OF THE 1<sup>ST</sup> GENERATION BIOFUEL , THE BIODIESEL FROM PALM OIL .

### **LADIES & GENTLEMEN,**

DESPITE THE UNFAVOURABLE PROPAGANDA OF CERTAIN QUARTERS AGAINST THE USE OF PALM OIL AS FUEL RATHER THAN FOOD , MALAYSIA IS STILL A KEY PLAYER OF THE 1<sup>ST</sup> GENERATION BIOFUEL . AS WE EMERGE FROM THE 9<sup>TH</sup> MALAYSIA PLAN , MALAYSIANS WILL HAVE EMBARKED ON THE 2<sup>ND</sup> GENERATION BIOFUEL , WHICH ARE BASED ON LOW VALUE BIOMASS AND ORGANIC WASTES , WITH ENERGY SOURCE DERIVED FROM BIOETHANOL AND BIOGAS FOR ELECTRICITY

GENERATION. IT IS ESTIMATED BY 2020 , THE 2<sup>ND</sup> GENERATION BIOFUEL WILL REACH 10% OF THE 1<sup>ST</sup> GENERATION BIOFUEL WITH THE RATIO INCREASING TO 1:1 BY YEAR 2030 .

LIKEWISE , IT IS ALSO ESTIMATED BY 2050 , 60% OF THE GLOBAL ELECTRICITY WILL BE GENERATED FROM NON-FOSSIL SOURCES . THIS WILL IN TURN HELP IN MEETING THE WORLD TARGET OF MAINTAINING GHG AT BELOW 450PPM EQUIVALENCE OF CARBON DIOXIDE , AND ARRESTING GLOBAL WARMING TO LESS THAN 2 DEGREES CELCIUS IN TEMPERATURE RISE .

SIMILARLY , RENEWABLE ENERGY HAS THE POTENTIAL TO PRODUCE CLEAN ENERGY FOR ALL . AND AS SUCH , MOSTI IS SUPPORTING THESE R&D EFFORTS ON R.E. AND ENERGY EFFICIENCY SO THAT THESE TWO ASPECTS OF ENERGY MANAGEMENT CAN PLAY A SIGNIFICANT ROLE IN THE ENERGY SUPPLY MIX .

THE BIOMASS RESOURCE FROM OUR 14 MILLION HECTARES OF PALM OIL PLANTATION AND OVER 400 PALM OIL MILLS IS OF ENORMOUS POTENTIAL FOR CONVERSION TO VARIOUS RENEWABLE ENERGY PRODUCTS . MOSTI IS CURRENTLY FUNDING A FULL-SCALE TECHNO-ECONOMIC

AND RESOURCE MAPPING STUDY TO IDENTIFY , LOCATE AND QUANTIFY THE AVAILABILITY OF THESE RESOURCES FOR CONVERSION TO RENEWABLE ENERGY INCLUDING SOLAR , WIND AND OCEAN RESOURCES .

THE DATABASE CREATED CAN THEN BE USED FOR THE COMMERCIALIZATION AND FEASIBILITY ANALYSIS BY INVESTORS AND FUNDING AGENCIES IN FUTURE . IT COULD ALSO PROVIDE INSIGHT INTO THE POTENTIAL OF CARBON DIOXIDE CAPTURE AND STORAGE (CCS) AS WELL AS CLEAN DEVELOPMENT MECHANISM (CDM) WHICH WE ANTICIPATE WILL LEAD TO MORE SUCCESSFUL COMMERCIALIZATION IN THE NEAR FUTURE .

**LADIES & GENTLEMEN ,**

THIS SUMMIT WILL HIGHLIGHT THE POTENTIAL OF RENEWABLE ENERGY THROUGHOUT THE NATION AND I HOPE RENEW SUMMIT 2009 WILL BE A PLATFORM FOR BUSINESSES , ACADEMICS AND GOVERNMENTS TO CHART THE ROAD MAP FOR THIS INDUSTRY .

I AM CONFIDENT ALL THE PARTICIPANTS WILL BE ABLE TO SHARE AND PRODUCE FRUITFUL OUTCOME AND SOLUTION TO THE RESEARCH AND TECHNOLOGY OF THE LOCAL RENEWABLE ENERGY SCENE .

MY SINCERE THANKS GOES TO THE ORGANIZER , SIRIM BERHAD , THE SARAWAK STATE GOVERNMENT AND THE SARAWAK CONVENTION BUREAU AND EVERYONE FOR THEIR INVALUABLE CONTRIBUTION AND SUPPORT IN ENSURING THE SUCCESS OF THIS EVENT .

WITH THESE WORDS , **I AM PLEASED TO OFFICIALLY LAUNCH THE NATIONAL RENEWABLE ENERGY SUMMIT 2009 .**

THANK YOU .

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