

FOR TAPING:

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Office of Technology Assessment
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"Technology Assessment" (

GOOD MORNING. I AM HERE TO TELL YOU ABOUT A NEW AGENCY OF THE UNITED STATES CONGRESS. SOMEONE HAS CALLED THIS AGENCY THE LOOK BEFORE YOU LEAP AGENCY. ITS NICKNAME IS OTA, WHICH IS SHORT FOR OFFICE OF TECHNOLOGY ASSESSMENT. BECAUSE I AM OTA'S DIRECTOR, WHAT I THINK THE EFFECT OTA WILL ALMOST CERTAINLY HAVE ON THE QUALITY OF LIFE IN AMERICA IS NECESSARILY BIASED. SO, INSTEAD OF GIVING YOU MY OPINION, I SHALL QUOTE A REMARK THAT KENNETH CLARK MADE ON ANOTHER TV PROGRAM SEVERAL WEEKS AGO, THIS ^{REMARKABLE} ~~ERUDITE~~ MEMBER OF THE BRITISH PEERAGE IS KNOWN EVERYWHERE FOR HIS STUDIES OF GENIUS ^{OF} ~~IN~~ TIMES PAST -- PAINTERS, SCULPTORS, WRITERS, MUSICIANS, GENERALS, ADMIRALS, EXPLORERS, STATESMEN. ON THE TV BROADCAST JUST MENTIONED, LORD CLARK CONFESSED DIFFICULTY IN FINDING COMPARABLE GENIUS IN THOSE SAME FIELDS OF

ENDEAVOR NOWADAYS. HE EXPLAINED THAT GENIUS NOW IS GOING INTO SCIENCE AND TECHNOLOGY. IF HE IS CORRECT, AND I BELIEVE HE IS, IT CAN MEAN ONLY ONE THING: SCIENCE AND TECHNOLOGY ARE, AND, FOR AT LEAST THE REMAINDER OF THIS CENTURY, QUITE LIKELY WILL BE THE STRONGEST FORCES IN DETERMINING THE QUALITY OF OUR LIVES.

FOR OUR PURPOSES, LET US BRING OUR THOUGHTS BACK TEN YEARS. AT THAT TIME, SCIENCE AND TECHNOLOGY WERE ALREADY POWERFUL INFLUENCES IN AMERICAN SOCIETY. [^]THE WHITE HOUSE, INDEED THE WHOLE EXECUTIVE BRANCH OF THE GOVERNMENT, RECOGNIZED THE OPPORTUNITY — USED THAT POWER, AND IT ^{IS} WAS DIFFICULT TO JUDGE HOW WISELY ³ THE PEOPLE OF AMERICA SOMEHOW BECAME ALARMED, AND BEGAN TO TRANSMIT THEIR CONCERN THROUGH THEIR ELECTED REPRESENTATIVES IN THE UNITED STATES CONGRESS. THAT PUBLIC FORUM, IN TURN, BECAME SENSITIVE TO THE NEED FOR A RELIABLE ALARM SYSTEM TO ALERT PEOPLE TO NEW TECHNOLOGICAL DEVELOPMENTS THAT COULD IMPROVE THEIR LIVES, AND, WHEN NEEDED, TO TRIGGER ^{THAT} ACTIONS [^] MIGHT BE NECESSARY TO CORRECT IN ADVANCE ANY ADVERSE EFFECTS THAT MIGHT ARISE FROM SUCH INNOVATIONS.

HOPEFULLY, OTA CAN BE THAT EARLY WARNING SYSTEM. ESTABLISHED BY ACT OF CONGRESS, OTA HAS BEEN FULLY FUNDED AND OPERATIONAL FOR JUST OVER A YEAR. IT IS RUN BY TWELVE MEMBERS OF CONGRESS; SIX DEMOCRATS, SIX REPUBLICANS; SIX FROM THE SENATE, SIX FROM THE HOUSE. SENATOR KENNEDY OF MASSACHUSETTS WAS ITS FIRST CHAIRMAN --

AND, BECAUSE THE CHAIRMANSHIP CHANGES WITH EVERY CONGRESS,
ITS PRESENT CHAIRMAN IS CONGRESSMAN TEAGUE OF TEXAS. THE
VICE CHAIRMAN -- AND THIS INDICATES THE BI-PARTISAN NATURE OF
THIS NEW AGENCY -- IS A REPUBLICAN, SENATOR CLIFFORD CASE OF
NEW JERSEY. THIS CONGRESSIONAL BOARD, WORKING WITH THE
COMMITTEES OF THE CONGRESS, HAS DETERMINED OTA'S PRIORITIES TO
INCLUDE: FOOD; ~~THESE~~ ENERGY; MATERIALS RESOURCES; THE
OCEANS; HEALTH; TRANSPORTATION, AND INTERNATIONAL TRADE. THOSE
ARE SUBJECTS ON JUST ABOUT EVERYBODY'S LISTS, ESPECIALLY THOSE OF
CONGRESSIONAL MEMBERS WHO ASK THAT THE SOCIAL, POLITICAL AND
ECONOMIC IMPLICATIONS AND EFFECTS OF TECHNOLOGICAL APPLICATIONS *in each
sector*
BE EXAMINED AS A PART OF EACH OTA ASSESSMENT. THIS WORK IS THEN
UNDERTAKEN
~~ACCOMPLISHED~~ BY THE OFFICE OF THE DIRECTOR, THROUGH THE USE
OF INTERNAL STAFF, ^{EXPERT} ~~PUBLIC~~ PANELS, INDIVIDUAL CONSULTATION, CON-
TRACTUAL ARRANGEMENTS, AND -- AS WIDE A PUBLIC INVOLVEMENT AS
POSSIBLE.

^{BROAD}
~~A WIDE~~ RANGE OF CONCERN ABOUT VARIOUS PROSPECTS AND PROBLEMS
RELATED TO TECHNOLOGY HAS BEEN DEMONSTRATED IN THE MORE THAN ~~25~~ 50 CONGRESSIONAL
ASSESSMENT REQUESTS ALREADY SUBMITTED TO OTA. THUS FAR, THE OFFICE HAS NOT
BEEN ABLE TO ADDRESS ALL OF THE SUBJECTS THAT HAVE BEEN RAISED, BUT IN THOSE
AREAS WHERE WORK HAS GONE FORWARD, THERE HAVE BEEN SOME SIGNIFICANT ^{ACHIEVEMENTS} ~~SUCCESSSES~~.
OTA HAS DEMONSTRATED THAT IT CAN MOBILIZE A ^{DIVERSIFIED} BODY OF EXPERTISE AND PRODUCE
BALANCED, OBJECTIVE AND TIMELY ANALYSES -- FREQUENTLY IN THE FACE OF TIGHT
CONGRESSIONAL DEADLINES.

^{THE}
IN ENERGY AREA, WE ALL RECOGNIZE THAT THERE HAS BEEN AN ENERGY CRISIS;
THAT, AS A NATION, WE ARE SEEKING ALTERNATIVE ENERGY SOURCES AND RESOURCES; THAT
WE MUST DEVELOP AN OVERALL ENERGY POLICY CAPABLE OF MEETING FUTURE NEEDS AND
DEMANDS. WE ALL ARE AWARE THAT BOTH INTERNATIONAL AND DOMESTIC FACTORS BEAR

UPON THE ENERGY PROBLEM -- A POINT BROUGHT HOME MOST VIVIDLY TO MOST OF US SOME MONTHS BACK WHEN WE HAD TO WAIT IN LONG LINES TO GET GASOLINE.

AS A RESULT, A WIDE-VARIETY OF ENERGY TECHNOLOGIES ARE NOW UNDERGOING INTENSIVE EXAMINATION AT ALL LEVELS OF GOVERNMENT. THESE INCLUDE THE RECOVERY OF OIL FROM SHALE FORMATIONS AND FROM BENEATH THE OCEAN FLOORS; PROCESSES FOR THE GASIFICATION AND LIQUEFACTION OF COAL, PRACTICAL MEANS FOR HARNESSING SOLAR, GEOTHERMAL AND WIND ENERGY, FURTHER ADVANCES IN THE NUCLEAR FIELD SUCH AS THE BREEDER-REACTOR AND, EVENTUALLY, THE FUSION PROCESS. MANY OF THESE TECHNOLOGIES OFFER GREAT PROMISE. ^{AND YET -} INHERENT IN MANY OF THEM ARE GREAT DANGERS. THE PUBLIC IS DEMANDING, AND THE GOVERNMENT IS SEEKING, A POLICY THROUGH WHICH SUFFICIENT SUPPLIES OF ENERGY WILL BE ASSURED WITH DUE REGARD FOR SAFETY, FOR THE PROTECTION OF THE ENVIRONMENT, AND FOR KEEPING DOWN THE COST TO THE CONSUMER. ^{OBVIOUSLY A COMPARATIVE ANALYSIS OF ALL ALTERNATIVES IS CALLED FOR.}

~~CONGRESS HAS CALLED UPON OTA~~ TO PERFORM SEVERAL TASKS IN THE

ENERGY AREA, INCLUDING A TECHNOLOGY ASSESSMENT OF SYSTEMS WHICH MIGHT ^{DIRECTLY} CONVERT SOLAR ENERGY INTO ELECTRICITY TO MEET THE NEEDS OF COMMUNITIES

OF UP TO 100,000 POPULATION. [THIS STUDY IS EXAMINING SEVERAL METHODS OF SOLAR ENERGY CONVERSION, AS WELL AS ADDITIONAL POSSIBILITIES

FOR UTILIZING THE SUN'S ENERGY IN THE HEATING AND COOLING OF BUILDINGS.]

WHEN THIS ASSESSMENT IS COMPLETE, ^{IT SHOULD HAVE ALSO BENEFITED} WE WOULD EXPECT TO BE ABLE TO MAKE

~~USE OF ITS FINDINGS~~ IN MEASURING AND EVALUATING OTHER PROPOSED SOLAR

ENERGY TECHNOLOGIES, AND THE TIME FRAMES WITHIN WHICH THEY CAN BE EXPECTED TO BECOME ECONOMICALLY FEASIBLE, ^{FROM NOW TO} ~~FROM THE RELATIVELY-NEAR~~

~~FUTURE, TO OR BEYOND THE END OF THE 20TH CENTURY~~ ^{AND BEYOND.}

AS A RESULT IN THAT
DIRECTION CONGRESS
HAS ASKED OTA

SINCE THE NEAR TERM IS ALWAYS EMPHASIZED IN THESE MATTERS.
HOWEVER, MOST PEOPLE WHO LIVE ALONG OUR NATION'S COASTS ARE AWARE THAT

THE GOVERNMENT WISHES TO EXPEDITE DRILLING FOR OIL FAR BEYOND THE THREE-MILE LIMIT. OTA ALREADY IS ASSISTING THE CONGRESS IN DETERMINING WHAT LEASING ARRANGEMENTS ARE BEST FOR ASSURING THAT OUTER CONTINENTAL SHELF OIL AND GAS EXPLORATION AND DEVELOPMENT WILL BE CONDUCTED IN A MANNER THAT BEST SERVES OUR NATIONAL INTERESTS. THE INFORMATION WHICH OTA HAS PRESENTED TO CONGRESS ABOUT OIL-LEASING ALTERNATIVES WAS DEVELOPED, IN PART, THROUGH AN ASSESSMENT PROJECT BEGUN LAST FALL, WHICH IS ADDRESSING THE SPECIFIC CONSEQUENCES OF TECHNOLOGICAL DEVELOPMENTS, INCLUDING OIL DRILLING, OFF THE COASTS OF NEW JERSEY AND DELAWARE.

THE OBJECTIVES OF OTA'S NEW JERSEY-DELAWARE STUDY ARE TO PROVIDE CONGRESS WITH THE BEST POSSIBLE ANSWERS TO QUESTIONS OF FUNDAMENTAL IMPORTANCE: HOW MUCH OIL IS ACTUALLY OUT THERE, AND HOW MUCH OF IT CAN REASONABLY BE RECOVERED WITH AVAILABLE TECHNOLOGY? WHAT ALTERNATIVE RECOVERY METHODS ARE AVAILABLE, AND HOW CAN WE ASSURE THAT OUR TECHNOLOGY IS APPLIED IN A MANNER THAT WILL BEST PROTECT THE ENVIRONMENT? HOW WILL THE ADJACENT COASTAL LANDS AND THE PEOPLE WHO RESIDE THERE BE AFFECTED, AND WHAT STEPS SHOULD BE TAKEN TO PROTECT THEIR INTERESTS? HOW CAN THE AFFECTED PUBLICS BEST BE INFORMED OF THE POTENTIAL BENEFITS AND RISKS THAT CAN BE EXPECTED TO ACCOMPANY OFFSHORE OIL DEVELOPMENT?

THE OCEANS, OF COURSE, ARE JUST ONE PART OF THE NATIONAL ENERGY PICTURE. A BRAND NEW FEDERAL AGENCY TO TAKE A COMPREHENSIVE APPROACH TO THE DEVELOPMENT OF NATIONAL ENERGY RESOURCES HAS JUST BEEN FORMED

THIS IS THE ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION, GENERALLY
REFERRED TO AS "ERDA". THE CONGRESS HAS BEEN ANXIOUS TO EXAMINE THE
EARLY PLANS AND PROPOSALS OF THIS VITAL NEW AGENCY, AND OTA HAS BEEN
CALLED UPON TO ASSIST IN THAT EXAMINATION BY PROVIDING INDEPENDENT
^{AN}
~~EXPERTS~~ ^{OF} TO REVIEW THE INITIAL ERDA BUDGET SUBMISSION. ~~OTA WAS THEN~~

As a result, OIA has been

ABLE TO PROVIDE CONGRESS WITH ISSUE PAPERS AND INTERROGATORIES BASED
ON QUESTIONS RAISED BY THE ERDA BUDGET. ~~IN THE AFTERMATH OF THIS~~
REVIEW PROCESS, ^{the} ~~A~~ HOUSE COMMITTEE, ^{as so} HAS VOTED TO AUTHORIZE ADDITIONAL
FUNDS FOR RESEARCH IN ENERGY CONSERVATION AND FOR SOLAR AND GEOTHERMAL
ENERGY DEVELOPMENT.

when those
meetings ended

~~WHILE ENERGY IS OF CENTRAL IMPORTANCE TO MOST OF THE ESSENTIALS,~~

~~AS WELL AS THE AMENITIES, BY WHICH WE MEASURE THE QUALITY OF OUR LIVES~~

~~IT IS BY NO MEANS THE ONLY FACTOR IN WHICH TECHNOLOGY PLAYS A DOMINANT~~

~~ROLE.~~ ^P MATERIALS RESOURCES OF ALL KINDS ARE ESSENTIAL TO OUR ECONOMY,

AND CONGRESS HAS ASKED OTA TO ASSESS ~~FOUR~~ MAJOR POLICY QUESTIONS ~~IN~~

~~THIS FIELD~~, RANGING FROM REUSE AND RECYCLING TO THE ESTABLISHMENT OF

NATIONAL STOCKPILES OF KEY COMMODITIES TO INSURE AGAINST SHORTAGES ~~AN~~

~~CAN BE ACHIEVED.~~ ^P FOR THOSE OF US WHO LIVE IN METROPOLITAN CENTERS, THE CONGESTION OF

OUR PRESENT MODES OF LOCAL TRANSPORTATION IS AN INCREASINGLY VEXING

PROBLEM. ^P CONGRESS HAS ASKED OTA TO HELP IT IN EXAMINING MASS TRANSIT

TECHNOLOGIES WHICH MIGHT PROVIDE FASTER, MORE EFFICIENT, AND MORE

CONVENIENT TRANSPORTATION FOR CITIZENS IN OUR CITIES. ^P FOOD AND

NUTRITION ARE MATTERS OF FOREMOST CONCERN DOMESTICALLY, AS WELL AS

INTERNATIONALLY. OTA HAS A MAJOR ASSESSMENT UNDER WAY FOR CONGRESS

DEALING WITH IMPROVED WAYS TO PROVIDE THE INFORMATION NEEDED TO SET

FOOD AND NUTRITION POLICY. ^P IN HEALTH, OTA HAS PROVIDED CONGRESS A

REPORT DEALING WITH METHODS TO ASSURE THE QUALITY OF PRESCRIPTION

DRUGS.

I would now like to look
at the other side of
the coin
of our lives

P

P

P

P

ALTHOUGH

THE CIA IS IN THE FORMATIVE STAGE

IN SUMMATION, LET ME SAY THAT ~~WHATEVER SUCCESS CIA HAS BEEN~~
~~ABLE TO ENJOY THUS FAR STEMS FROM THE WHOLEHEARTED COOPERATION AND~~
~~ASSISTANCE WHICH HAS BEEN FORTHCOMING FROM THE TECHNOLOGICAL COMMUNITY~~
~~FROM INDUSTRY, THE ACADEMIC WORLD AND OTHER GOVERNMENT AGENCIES --~~
AS WELL AS FROM CONCERNED LAYMEN, REPRESENTING THE DIVERSE INTERESTS

OF ORDINARY CITIZENS AND WORKERS. THE CONGRESS, FOR ITS PART, HAS
~~SHOWN THAT IT FEEL REFLECTED THAT CONCERN ABOUT THE NEED~~
CLEARLY RECOGNIZED THE NEED TO BETTER EMPLOY TECHNOLOGY TO SERVE THE
PURPOSES OF OUR DEMOCRATIC SOCIETY.

THE OPA
OTA'S ROLE IS TO PROVIDE AN EARLY WARNING SYSTEM TO INSURE
THAT THE RIGHT QUESTIONS ARE ASKED ABOUT THE EFFECTS OF TECHNOLOGY, ~~IMPROVE~~
SO THAT THE RIGHT ANSWERS MAY BE OBTAINED. ~~ADD TO INTEND THAT LEGISLATION BE~~ IN SEEKING THIS OBJECTIVE,
WE HOPE THAT ALL OF US CAN BETTER UNDERSTAND, AND BETTER UTILIZE,
TECHNOLOGY IN IMPROVING THE QUALITY OF LIFE ON THIS FRAGILE PLANET.

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OUR DEMOCRATIC SOCIETY WORKS BEST WHEN
THERE IS A RECOGNIZED RELATIONSHIP BETWEEN
PUBLIC EDUCATION AND THE CHOICES WE MAKE.
IF IN CONGRESSIONAL DEBATE THAT LINE CAN
BE IMPROVED, IF PEOPLE CAN UNDERSTAND AND BETTER
WHAT THE PROBLEMS ARE, WHAT OPTIONS AND
ALTERNATIVES ARE AVAILABLE, WHY A COURSE OF
ACTION HAS BEEN TAKEN, THERE WILL PROBABLY BE
MORE SUCCESS IN WHAT WE DO, AND FAILURES WILL BE BETTER UNDERSTOOD