Agenda...

### SPECIAL MEETING OF THE CONFERENCE BOARD

# Atomic Energy in Industry

4th ANNUAL CONFERENCE

"International Cooperation for Betterment of Mankind"

### **Round Table Conferences:**

- Nuclear Power Costs
- Problems of Safety and Health
- Nuclear Fuels Liquid vs. Solid
- Building and Operating a Nuclear Plant
- Nuclear Transportation
- Atomic Energy Insurance Problems
- Commercial Power Reactor Designs
- · How the New Law is Working
- Fission Waste Problems

The Investment Outlook

Radioisotopes in Industry

- Selling in the Foreign Market
- Evaluation of U.N. Geneva Conference

Research and Package Reactor Uses

Metallurgy and Reactor Components

- Application of Fission Products
- INTERNATIONAL DEVELOPMENTS IN ATOMIC ENERGY: I, II, III
- THE NON-WEAPONS POTENTIALS OF THERMONUCLEAR ENERGY

OCTOBER 26-27-28, 1955

WALDORF-ASTORIA HOTEL, NEW YORK

# About This Conference...

A FREE, COMPETITIVE atomic energy industry is being born and will assume considerable stature in 1956. Aided by the new Atomic Energy Act of 1954 and encouraged by the probability of competitive-cost nuclear power, American industry has embarked on a large program of atomic research and investment. But America is not alone in the race for recognition and markets. Throughout the world large sums are being expended to bring mankind the utmost benefit through peaceful applications of atomic energy and to bring the industrial concerns involved and their countries the commercial rewards which may come from widespread adoption of nuclear power.

The coming year will be a crucial one for the newly born American atomic energy industry. Many obstacles face American companies that hope to build, sell and operate nuclear equipment at home and abroad. Problems of safety and insurance, of waste disposal, of government ownership of fissionable material, of foreign contracts, of patent protection and of metallurgy and chemistry, to name a few, require solution. Will they be solved? If so, how and when? And then what will be the size and the nature and the profitability of the atomic energy industry? These are some of the subjects which will be discussed at The Conference Board's Fourth Annual Conference on Atomic Energy in Industry.

This conference will not only examine the domestic picture but will also provide a comprehensive review of the progress that is being made throughout the world toward low-cost nuclear power and other peaceful uses of atomic energy. Finally, the conference will end with what is thought to be the first public and unclassified discussion in the United States of the nonmilitary potentials of thermonuclear energy—in other words, how H-Bomb power can be harnessed for industrial use.

On the pages which follow are descriptions of the various sessions of this conference and the names of some of the nearly one hundred scientists, government officials, and business men from all over the world who will participate in it. Also attached is a reservation form. Interest in these annual conferences on atomic energy has always been high, and registrations have repeatedly strained the capacity of our accomodations. This year it may be necessary to limit registration. To avoid disappointment, therefore, may I suggest that you make reservations immediately for yourself and your business associates.

Sincerely,

John S. Smilai.
President

## st DAY ... WEDNESDAY, OCTOBER 26, 1955

MORNING 9:00 a.m. to 12:00 Noon

### Current Outlook on Muclear Power Costs

Some say that competitive cost nuclear power is already here. Others contend that several obstacles have yet to be surmounted before atomic power will rival power from conventional coalsteam generation. This panel will examine all points of view and attempt to assess the current outlook.

Chairman: W. KENNETH DAVIS, Director, Division of Reactor Development, United States
Atomic Energy Commission

Speakers: JOHN DAVIS, Department of Trade and Commerce, Canada, and Economic Consultant, Atomic Energy of Canada Limited

RT. HON. LORD CITRINE, Chairman, Central Electricity Authority of Great Britain

R. D. MAXSON, Senior Vice-President, Commonwealth Edison Company, and Chairman, Operating Committee, Nuclear Power Group

(Additional speaker to be announced)

## How To Solve the Problems of Safety and Health

Safety and health considerations threaten to impose serious cost burdens on the private atomic energy industry. This panel will examine the true nature of the risks involved and give their views as to the degree of protection which prudence dictates. Foreign as well as domestic experiences will be reported upon.

Chairman: MERRIL EISENBUD, Manager, New York Operations Office, United States Atomic Energy Commission

Speakers: A. J. CIPRIANI, Director, Biology Division, Atomic Energy of Canada Limited LAURISTON S. TAYLOR, Chief, Atomic and Radiation Physics Division, National Bureau of Standards, United States Department of Commerce

B. P. SONNENBLICK, Department of Biology, Rutgers University

A. D. MacDOUGALL, Electric Boat Division, General Dynamics Corporation

## Nuclear Juels—Liquid vs. Solid

Some of the power reactors being developed in the United States and abroad use a liquid fuel. Others utilize fissionable material in the solid form. Each system has special advantages. Homogeneous fuels may mean cheaper chemical processing costs, while solid fuels offer higher thermal efficiencies. All are aimed at producing economic nuclear power. At this session, the advantages and disadvantages of the different systems will be weighed in terms of the net result—competitive nuclear power.

Chairman: LOUIS RODDIS, Deputy Director, Division of Reactor Development, United States
Atomic Energy Commission

Speakers: JOHN J. GREBE, Director, Nuclear Research & Development, The Dow Chemical Company

RUSSELL W. DAYTON, Battelle Memorial Institute

JOHN A. SWARTOUT, Deputy Director, Oak Ridge National Laboratory

BERNARD KOPELMAN, Chief Engineer, Atomic Energy Division, Sylvania Electric Products Inc.

FRANCIS T. MILES, Senior Chemist, Nuclear Engineering Department, Brookhaven National Laboratory 9:00 a.m. to 12:00 Noon

## Problems of Building and Operating a Nuclear Plant

This session will review the problems encountered in building and operating a nuclear power plant, covering such points as design and construction problems, training and staffing a nuclear power unit, how plant locations are decided and operating problems that are unique to this new industry. Emphasis will be on how these problems can be avoided and most effectively and expeditiously solved.

- Chairman: R. L. DOAN, Manager, Atomic Energy Division, Research and Development Department, Phillips Petroleum Company
- Speakers: J. BARTON HOAG, Assistant Director, School of Nuclear Science and Engineering, Argonne National Laboratory
  - M. ARAGOU, Chief Engineer, Société Des Forges et Ateliers du Creusot, Usines Schneider, France
  - J. N. LANDIS, Vice-President, Bechtel Corporation
  - MARVIN FOX, Chairman, Reactor Department, Brookhaven National Laboratory

## Luncheon Session

12:15 p.m. to 2:15 p.m.

GRAND BALLROOM

### INTERNATIONAL DEVELOPMENTS: I

Chairman: JOHN S. SINCLAIR, President, National Industrial Conference Board

Introduction: ERNEST O. LAWRENCE, Director, Radiation Laboratory, University of California

Speaker: SIR JOHN COCKCROFT, Director, Atomic Energy Research Establishment, United Kingdom Atomic Energy Authority

AFTERNOON 2:30 p.m.

## Outlook for Nuclear Rail, Ship and Air Transportation

Admiral Strauss, Chairman, U. S. Atomic Energy Commission, stated recently that a significant break-through had been achieved in the development of atomic-powered aircraft. The Navy is developing a family of reactors for naval vessels, and U. S. railroad companies are taking a hard look at the possibility of an atomic-powered locomotive. A distinguished panel will discuss some of the unique problems attendant to mobile nuclear power plants, their costs and possibilities of their future role in commercial transportation.

Chairman: Gen. DONALD J. KEIRN, USAF, Chief, Aircraft Reactors Branch, U.S. Atomic Energy Commission

Speakers: EVERETT P. BLIZARD, Director, Division of Applied Nuclear Physics, Oak Ridge National Laboratory

R. L. WHITELAW, Nuclear Engineer, Atomic Energy Division, The Babcock & Wilcox Company

LYLE B. BORST, Chairman, Physics Department, New York University (Additional speaker to be announced)

st DAY ... WEDNESDAY, OCTOBER 26, 1955

AFTERNOON

2:30 p.m.

5:30 p.m.

### How Can The Insurance Problems Be Solved?

The insurance problems of this new industry are of major concern to management interested in building and operating a nuclear power plant. The preliminary report of an AEC advisory committee of insurance executives stated that most hazards of industrial atomic energy can be insured under current insurance practices. However, it indicated that further study was needed on such hazards as the radioactive contamination of buildings and machinery. With the "catastrophe potential" of nuclear power plants still unknown some think it will be necessary for the government to step in and insure atomic dangers over and above normal coverage. The insurance situation and outlook will be thoroughly reviewed at this session.

Chairman: JAMES L. MADDEN, Trustee, National Industrial Conference Board, Second Vice-President—Coordination, Metropolitan Life Insurance Company

Speakers: W. J. SATTERFIELD, JR., Chief, Insurance Section, United States Atomic Energy Commission

CHARLES J. HAUGH, Vice-President, Travelers Insurance Company

ARVIN E. UPTON, Partner, Le Boeuf, Lamb and Leiby

(Additional speaker to be announced)

## Optimum Reactor Designs for Commercial Power

Commercial nuclear power programs are underway in this country, France, Belgium, Great Britain, Canada, and Russia, and plans are going forward for nuclear power in Brazil, India and many other countries. A world-wide competition is in progress to develop the most efficient design and capture a foothold in the world power market. The speakers in this session will review some of the more promising types of reactors in development in several countries, and give their opinions as to what types and designs of nuclear reactors will prove most efficient and economical.

Chairman: CHARLES H. WEAVER, Vice-President, Westinghouse Electric Corporation

Speakers: HAROLD A. SMITH, Coordinator, Nuclear Power Group, The Hydro-Electric Power Commission of Ontario

BRUCE R. PRENTICE, Atomic Power Equipment Department, General Electric Company

JOHN R. MENKE, President, Nuclear Development Associates, Inc.

ROGER JULIA, Director General, Société Alsacienne de Constructions Mécaniques, France (Presented by P. A. Herreng, Director, Laboratories, Société Alsacienne de Constructions Mécaniques)

### How The New Law is Working

The new Atomic Energy Act has been on the books almost a year. How is it working? Does it set up road blocks and limitations to the development of a vigorous atomic energy industry? Are revisions necessary? This panel will review the experience of the past year under the new act, and suggest changes that seem needed to further the growth of this new industry.

Chairman: OSCAR M. RUEBHAUSEN, Debevoise, Plimpton & McLean, and Chairman, Committee on Atomic Energy, New York City Bar Association

Speakers: W. A. DE HAAS, Member of the Board of the Foundation Reactor Centre in the Netherlands and Patent Department, N. V. Philips' Gloelampenfabrieken

H. L. PRICE, Director, Division of Civilian Applications, United States Atomic Energy Commission

(Additional speakers to be announced)

Lst DAY... WEDNESDAY, OCTOBER 26, 1955

# Evening Session

7:45 p.m. to 9:30 p.m.

#### INTERNATIONAL DEVELOPMENTS: II

Chairman: (To be announced)

Speakers: C. J. BAKKER, Director General, European Council for Nuclear Research, Geneva, Switzerland

PEDRO IRAOLAGOITIA, Secretary General, National Commission of Atomic Energy, Argentina

GUNNAR RANDERS, Director, Joint Establishment for Atomic Energy Research, Norway

REPRESENTATIVE, Science Council of Japan

2nd DAY... THURSDAY, OCTOBER 27, 1955

# Morning Session

9:00 a.m. to 12 Noon

### INTERNATIONAL DEVELOPMENTS: III

Chairman: THE HONORABLE MOREHEAD PATTERSON, United States Representative for International Atomic Energy Agency Negotiations and Chairman and President, American Machine and Foundry, Inc.

Speakers: WILLIAM BENNETT, President, Atomic Energy of Canada, Limited

VOJKO PAVICIC, Director, Institute of Nuclear Sciences, "Boris Kidrich", Yugoslavia

MANUEL SANDOVAL VALLARTA, Scientific Research Director, National University of Mexico

REPRESENTATIVE, The Union of Soviet Socialist Republics

## 2nd DAY... THURSDAY, OCTOBER 27, 1955

### **AFTERNOON**

2:30 p.m. to 5:30 p.m.

## Research and Package Reactor Uses

A number of U.S. firms can now supply low-power research reactors for industry, universities, and medical centers. The potential customer list is growing rapidly. The package power reactor also seems to have a bright future in the foreign market. This session will discuss the potentials of this market, and some of the promising uses for low power and package power reactors.

Chairman: C. E. LARSON, Director, Oak Ridge National Laboratory

Speakers: W. M. BREAZEALE, Professor of Nuclear Engineering, Pennsylvania State University

ADMIRAL W. D. LEGGETT, JR., Vice-President-Engineering, Alco Products, Inc.

R. F. HUMPHREYS, Manager, Physics Research Department, Armour Research Foundation of Illinois Institute of Technology

ALBERT C. HALL, Head of Research, Bendix Aviation Corporation

## Metallurgical Problems and Reactor Components

Though the steam generator side of a nuclear power plant is fairly conventional, it poses several problems. Among them are metallurgical ones which include the reprocessing of nuclear fuels and radiation damage. Speakers will discuss current progress in these fields and the outlook for satisfactory solutions.

Chairman: LELAND J. HAWORTH, Director, Brookhaven National Laboratory

Speakers: KARL WIRTZ, Max-Planck-Institut für Physik, Germany

G. W. HATFIELD, Works Manager, Industrial Operations, Atomic Energy of Canada Limited

HENRY H. HAUSNER, Manager, Atomic Energy Engineering, Sylvania Electric Products Inc.

ROBERT N. BREY, Project Manager, Nuclear Power Group, Leeds & Northrup Company.

## Investment Outlook in Atomic Energy

Almost every public announcement of industrial development in atomic energy creates a flurry of activity in the stock of the company or companies concerned. Is this warranted? Are atomic energy stocks being under- or over-sold? A realistic analysis is necessary before either management or the investor can make a sound appraisal. This panel will take a careful look at the atomic industry and attempt to assess its investment potentials, both short and long term.

Chairman: DAVID E. LILIENTHAL, former Chairman, U.S. Atomic Energy Commission and Chairman of the Board, Development and Resources Corporation

Speakers: ROBERT LEBARON, Former Chairman of Military Liaison Committee to the Atomic Energy Commission

NEWTON I. STEERS Jr., President and Director, Atomic Development Securities Company

(Additional speakers to be announced)

2nd DAY... THURSDAY, OCTOBER 27, 1955

AFTERNOON 2:30 p.m. to

5:30 p.m.

## Radioisotopes As a Research and Production Tool

Practically every day some new use for radioisotopesis discovered. The benefits they have afforded industry in improving production techniques, operations control, and product quality are saving millions of dollars for American firms. They are also proving invaluable as research tools. Their use is making research projects possible that were once thought impossible to accomplish or too difficult and expensive to prove worthwhile. This panel will review the latest industrial uses of radioisotopes.

Chairman: PAUL C. AEBERSOLD, Director, Isotopes Division, U.S. Atomic Energy Commission

Panel DONALEE L. TABERN, Head, Department of Radio-Pharmaceuticals, Members: Abbott Laboratories

R. R. BALDWIN, Director, Biochemical Laboratory, General Foods Corporation HOMER S. MYERS, Sales Manager, Tracerlab, Inc.

D. C. BRUNTON, President, Isotope Products Limited, Canada

W. A. DE HAAS, Member of the Board of the Foundation Reactor Centre in the Netherlands and Patent Department, N. V. Philips' Gloelampenfabrieken

(Additional panel members to be announced)

## Dinner Session

Beginning with Reception in the Grand Ballroom Waldorf-Astoria

at 6:00 p.m.

(Informal)

Chairman: HERMAN W. STEINKRAUS, Trustee, National Industrial Conference Board and Chairman and President, Bridgeport Brass Company

#### · · · KEYNOTE ADDRESS · · ·

Details to be announced later

3rd DAY... FRIDAY, OCTOBER 28, 1955

9:00 a.m. to 12:00 Noon

### Disposal of Fission Wastes

Atomic reactors produce "ashes", just as do the coalfired furnaces. However, these ashes are different in that they are extremely radioactive. The disposing of these materials is a major problem. Unless this problem is satisfactorily solved, say some, it may prove to be a severely limiting factor in the development of a large scale nuclear power program. Representatives from this country, Canada, and Great Britain will compare methods of disposal of the fission ashes of nuclear reactors.

Chairman: BERNARD MANOWITZ, Leader, Fission Products Utilization Project, Brookhaven National Laboratory.

Speakers: P. V. DANCKWERTS, United Kingdom Atomic Energy Authority

L. G. COOK, Co-Director, Chemistry and Metallurgy Division, Atomic Energy of Canada Limited

WALTON A. RODGER, Argonne National Laboratory

WILLIAM A. BAIN, Director, West Orange Laboratory, Vitro Corporation of America

## Selling in the Foreign Market

A world-wide competition is in progress in the atomic energy field and foreign markets may offer sizable commercial opportunities. What are the potentials of this market? What specific products does the foreign market seek? How does one go about getting foreign orders? And, are there profits in this business? This panel will review these questions and attempt to define the foreign market potentials in the atomic energy field.

Chairman: GORDON R. MOLESWORTH, President, Molesworth Associates

Speakers: JEROME D. LUNTZ, Editor, Nucleonics

O. B. FALLS, Manager, Marketing, Atomic Power Equipment Department, General Electric Company

WILLIAM E. BARBOUR, Jr., President, Tracerlab, Inc.

JOHN LANDIS, Assistant Manager, Atomic Energy Division, The Babcock & Wilcox Company

G. GABRIELLI, Director, Aviation Division, Fiat, Italy

## Evaluation — U. N. Geneva Conference

The U. N. Atomic Energy Conference reviewed the nuclear developments of several dozen countries. This round-table session of our Annual Conference will present an *evaluation* of the significant information presented at the Geneva Conference. Experts who attended in Geneva will evaluate developments in the following fields as presented to the U. N. Conference: Reactor Technology, Nuclear Power Programs, Radioisotopes in Industry and Economics of Nuclear Power.

Chairman: To be announced

Speakers: W. B. LEWIS, Vice-President, Research and Development, Atomic Energy of Canada Limited

> JAMES A. LANE, Director, Reactor Experimental Engineering Division, Oak Ridge National Laboratory

S. EDWARD EATON, Arthur D. Little, Inc.

S. UNTERMEYER, Atomic Products Division, General Electric Company

### MORNING 9:00 a.m. 12:00 Noon

## Industrial Applications of Gross Fission Products

At present, gross fission products are being disposed of or chemically reprocessed. Because of their intense radioactivity, disposal or reprocessing is most difficult and adds appreciably to the cost of operating reactors. Very promising industrial applications of these wastes are in the offing and if these uses prove feasible, they may contribute substantially to a reduction in reactor power costs. These projected uses will also improve products and significantly lower costs of various industrial processes such as food sterilization. The panel will discuss the applications of gross fission products which are currently being considered and will evaluate their industrial significance.

Chairman: BLAINE B. WESCOTT, Executive Vice-President, Gulf Research and Development Company

Speakers: DAVID S. BALLANTINE, Nuclear Engineering Department, Brookhaven National Laboratory

ARTHUR V. PETERSON, Vice-President, AMF Atomics, Inc.

W. M. URBAIN, Swift & Company

(Additional speaker to be announced)

# Luncheon and Closing Session

12:30 to 3:00 p.m.

GRAND BALLROOM

#### THE NON-WEAPONS POTENTIALS OF THERMONUCLEAR ENERGY

Chairman: JOHN S. SINCLAIR, President, National Industrial Conference Board Speaker: HANS THIRRING, Director, Institute for Theoretical Physics, Vienna, Austria (Additional speakers to be announced)



To: Director, Conference Division National Industrial Conference Board 460 Park Avenue, New York 22, N.Y.

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Wednesday October 26  9:00 A.M. to 12 Noon Current Outlook on Nuclear Power Costs 9:00 A.M. to 12 Noon How To Solve the Problems of Safety and Health 9:00 A.M. to 12 Noon Nuclear Fuels—Liquid versus Solid  D. 9:00 A.M. to 12 Noon Problems of Building and Operating a Nuclear Plant 12:15 P.M. to 2:15 P.M Luncheon: International Developments: I  F. 2:30 P.M. to 5:30 P.M Outlook for Nuclear Rail, Ship and Air Transportation G. 2:30 P.M. to 5:30 P.M How Can the Insurance Problems Be Solved? H. 2:30 P.M. to 5:30 P.M Optimum Reactor Designs for Commercial Power I. 2:30 P.M. to 5:30 P.M How the New Law is Working J. 7:45 P.M. to 9:30 P.M Evening Session: International Developments: II																																							
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