

PROGRAM AND TABLE OF CONTENTS

The Energy Problem in Perspective, M.D. Fiske, presiding
Monday, 4 February, 9:00 A.M.

AA1	The Fuel Situation	
	J.C. Fisher, General Electric Company.....	1
AA2	Physics and Energy Conservation (Abstract only)	
	John H. Gibbons, U.S. Department of Interior.....	15
AA3	Research Priorities for the Electric Utility Industry	
	Chauncey Starr, Electric Power Research Institute.....	16
AA4	The Energy Problem in Perspective (Abstract only)	
	Paul F. Donovan, National Science Foundation.....	27
AA5	Toward a National Energy Policy (Text not available)	
	John Andelin, Administrative Aide, Congressman Mike McCormack	

Resource Development, W.C. Griffith, presiding
Monday, 4 February, 2:00 P.M.

BA1	Contributions of Physicists to the Exploration for Hydrocarbons	
	Franklyn K. Levin, Esso Production Research Company.....	28
BA2	Coal Liquefaction	
	Harry Perry, Resources for the Future.....	43
BA3	Fluid-Bed Physics (Text not available)	
	David Archer, Westinghouse Electric Corporation	
BA4	Catalysis	
	T.E. Fischer, Esso Research and Engineering Co.....	56

Mobile Powerplants, F.E. Jamerson, presiding
Tuesday, 5 February, 9:00 A.M.

DA1	To Drive or Breathe?	
	P.S. Myers, University of Wisconsin.....	70
DA2	Combustion Modeling in Automotive Engines	
	John B. Heywood, Massachusetts Institute of Technology..	102
DA3	High Temperature Materials for Automotive Power Plants	
	J.J. Harwood, Ford Motor Company.....	115
DA4	Energy Requirements for High Speed Ground Transport Systems	
	John T. Harding, Federal Railroad Administration.....	130

Energy Transmission and Storage, B. Weinstock, presiding
Wednesday, 6 February, 9:00 A.M.

GA1	Opportunities for Physicists in the Area of Electric Power Delivery	
	Allan Greenwood, Rensselaer Polytechnic Institute.....	140

GA2	Dielectric Breakdown Problems in Electric Energy Transmission and Storage	
	Thomas W. Dakin, Westinghouse Research Laboratories.....	153
GA3	Physics Opportunities in Electrochemical Energy Conversion	
	E.J. Cairns, General Motors Research Laboratories.....	160
GA4	The Hydrogen Economy Concept	
	D.P. Gregory, Institute of Gas Technology.....	171

Power Generation: Fission, B.L. Cohen, presiding
Wednesday, 6 February, 2:00 P.M.

HA1	Breeder Reactors - The Physicist's Contribution	
	M. Dyos, Westinghouse Corporation.....	175
HA2	Radiation Damage in Reactors	
	G.H. Vineyard, Brookhaven National Laboratory.....	182
HA3	High-Level Radioactive Waste Disposal	
	R.C. Liikala, R.W. McKee and W.K. Winegardner, Battelle-Northwest Laboratory.....	202
HA4	Reactor Safety	
	Herbert Kouts, U.S. Atomic Energy Commission.....	242

Power Generation: Fusion, S.J. Buchsbaum, presiding
Thursday, 7 February, 9:00 A.M.

JA1	Lasers for Fusion	
	Keith A. Brueckner, KMS Fusion, Inc.....	260
JA2	Electron-Beam-Induced Fusion	
	Gerold Yonas, Sandia Laboratories.....	299
JA3	Magnetic Confinement of Thermonuclear Plasmas	
	H.P. Furth, Princeton University.....	314
JA4	Physics Problems of Thermonuclear Reactors	
	F.L. Ribe, Los Alamos Scientific Laboratory.....	337

Power Generation: Other Options, J.K. Hulm, presiding
Thursday, 7 February, 2:00 P.M.

KA1	MHD Power Generation	
	A. Kantrowitz and R.J. Rosa, Avco Everett Research Laboratory, Inc.....	357
KA2	Solar Research and Technology	
	L.O. Herwig, National Science Foundation.....	379
KA3	Geothermal Power	
	M.C. Smith, Los Alamos Scientific Laboratory.....	401
KA4	Solar Sea Power	
	Clarence Zener, Carnegie-Mellon University.....	412