

1956**South African Cabinet Memorandum, Research in
the Field of Nuclear Energy and Exchanging
Information with Friendly Nations****Citation:**

"South African Cabinet Memorandum, Research in the Field of Nuclear Energy and Exchanging Information with Friendly Nations", 1956, Wilson Center Digital Archive, South African Foreign Affairs Archives, Atomic Research Union of South Africa.137.11.23.Vol. 1.Atomic Energy.3.5.56-1.6.57. Obtained and contributed by Anna-Mart van Wyk, Monash South Africa.
<https://digitalarchive.umd.edu/document/116048>

Summary:

South African Cabinet memorandum discussing the potential for nuclear cooperation and technology assistance from various friendly countries, including the United States, Great Britain, and the Netherlands.

Credits:

This document was made possible with support from Carnegie Corporation of New York (CCNY)

Original Language:

Afrikaans

Contents:

Original Scan
Translation - English

KABINETS MEMORANDUMNAVORSING OP GEBIED VAN KERNENERGIE EN
UITRUIL VAN INLIGTING MET VRIENDSKAPLIKE
VOLKERE : SLUITING VAN VRIENDSKAPSVERDRAE

Soos aan Ministers bekend het die Unie deur middel van die Raad op Atoomkrag n kontrak aangegaan met die Gesamentlike Ontwikkelings Agentskap, bestaande uit die Atoomkrag Kommissie van die Verenigde State van Amerika en die Atoomkrag Tutoriteit van Groot Brittanje, om vir die volgende 10 jaar ± 5000 ton uraan-oksied per jaar te lewer, wat teen die huidige gemiddelde prys ± £40,000,000 aan buitelandse valuta vir Suid-Afrika beteken. Bo en behalwe die belasting op profyt wat die Skatkis jaarliks in, is daar ook n direkte inkomste vir die Stes van ± £250,000 per jaar van verkopings van uraan-oksied. Sonder om verder in te gaan op die ander voordele wat die land uit hierdie nywerheid trek, sal dit besef word dat dit voorwaar n belangrikke nywerheid is.

Vir die inligting van Ministers word die volgende inligting verstrekk:-

BETALINGS EN ONTVANGSTE IN URAAN.

<u>Finansiële Jaar</u>	<u>Betaal aan Myne</u>	<u>Betaal aan Skatkis</u>	<u>Totaal</u>
1952/53	327,897- 9-6	2,889-10- 6	330,787- 0- 0.
1953/54	4,858,473- 3-9	34,571- 6-0	4,893,044- 9- 9.
1954/55	15,114,538- 0-6	97,555-17-3	15,212,093-17- 9.
1955/56	31,051,685-11-4	184,784- 4-0	31,236,469-15- 4.
	<u>£51,352,594- 5-1</u>	<u>£319,800-17-9</u>	<u>£51,672-395- 2-10.</u>

Tot nog toe het Suid-Afrika hom feitlik uitsluitlik bepaal tot die produksie en bemarking van uraan-oksied, en omdat hy een van die grootste produseerders is het die Unie n aansienlike status verwerp op Internasionale gebied. Met produksie alleen sal Suid-Afrika egter nie sy posisie kan bly handhaaf nie.

Sedert President Eisenhower se geskiedkundige verklaring van "Atoms for Peace" en die Geneefse Konferensie is die hele mensdom se verbeelding gemaak oor die Vredesgebruike van atoomkrag. Hoewel die Amerikaanse, die Engelse en die Russe

ander lande ver vooruit is op die gebied van navorsing, die land van betekenis reeds besig om groot somme geld op die navorsing te spandeer, dit ten spyte van die gevaar dat navorsingswerk gedupliseer mag word en miskien binne n kort tydperk verouderd mag wees. Selfs n klein volkie soos Noorwee is besig met sy eie Kernenergie Navorsingsprogram. Dit is duidelik dat Suid-Afrika nie op hierdie gebied kan agterbly nie.

Volgens n verslag wat uitgebring is deur een van die lede van die Raad op Atoomkrag wat onlangs die V.S.A. besoek het, het die V.S.A. reeds vriendskapsverdrae vir samewerking met 27 lande aangegaan. Die Voorsitter van die Amerikaanse Atoomkrag Kommissie het sy teleurstelling teenoor ons Ambassadeur in Washington uitgespreek dat daar nog nie n dergelike ooreenkoms met Suid-Afrika aangegaan is nie. Die Amerikaners is gretig om Suid-Afrika te help, maar kragtens hulle Wet op Atoomkrag, mag hulle nie soveel soos 1 milligram uraan 235 aan Suid-Afrika verskaf nie tensy daar n ooreenkoms tussen die V.S.A. en die Unie bestaan. Verder beskou die Amerikaners die sluiting van so n ooreenkoms as die eerste stap tot verdere samewerking op die gebied van kernenergie, en selfe moontlike geldelike hulp vir die oprigting van n Kernreaktor in Suid-Afrika. Ons verteenwoordigers is mee gedeel dat die V.S.A. bereid is om die helfte tot n maksimum van \$350,000 by te dra tot die eerste eksperimentele reaktor wat in Suid-Afrika opgerig mag word. Daar is geen voorwaardes aan hierdie aanbod verbonde nie. Die geskenk van \$350,000 kan, as dit aanvaar word, gebruik word op enige wyse wat die Raad op Atoomkrag mag besluit, selfs vir die oprigting van n gebou by n reaktor wat op n ander wyse verkry is.

Die Raad op Atoomkrag het reeds n konsep ooreenkoms opgestel wat eersdaags aan Ministers voorgelê sal word en dit word sterk aanbeveel dat so n ooreenkoms met die Verenigde State van Amerika aangegaan word.

Wat n reaktor betref, het die Raad op Atoomkrag n Navorsingsadvieskomitee onder die Voorsitterskap van Dr. H.J. van Eck aangestel wat tans besig is om n Navorsingsprogram vir die Raad op Atoomkrag op te stel. Tot tyd en wyl die program opgestel is kan daar natuurlik nie n aanduiding gegee word of die gulle aanbod van die V.S.A. nou reeds aanvaar moet word nie.

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Die Regering van Groot Brittanje en die Atoomkrag Britteit van Engeland het al op verskeie geleenthede te name gegee dat hulle bereid is om aan Suid-Afrika vertroulike inligting te gee i.v.m. die vredes gebruike van Kernkrag asook die verwardiging van swaarwater. Die Engelse staan egter daarop dat Suid-Afrika n defenitiewe navorsingsprogram moet aanpak, waarna hulle bereid sal wees om alle beskikbare inligting wat betrekking het op die voorgestelde program beskikbaar te stel. Hierdie aanbod is ook onderhewig aan die voorwaarde dat Suid-Afrika n vriendskapsverdrag tot samewerking vir die vredes gebruike van Kernenergie met Engeland moet aangaan. Ook hier meen die Raad op Atoomkrag dat daar sonder versuim n ooreenkoms aangegaan moet word, want ons studente wat tans in Engeland studeer kry nie dieselfde toegang tot inligting nie, as wat studente kry wat van lande kom met wie daar reeds n ooreenkoms gesluit is. Dit is noodsaaklik dat alle beskikbare inligting ingewin word sodat daar nie op probleme gewerk word waarop daar reeds antwoorde of oplossings verkry is deur Amerika en Engeland. Die Raad op Atoomkrag het reeds n konsep ooreenkoms opgestel wat eersdaags aan Ministers voorgelê sal word vir oorweging.

Die Nederlandse Regering het ook informeel navraag gedoen of die Unie nie sou belangstel in samewerking met Nederland i.v.m. die vredesgebruike van Atoomkrag nie. Hoewel Nederland nie n produseerder van Uraan is nie, het hy reeds n groot navorsingsprogram i.v.m. kernkrag aan die gang. Die Nederlanders het b.v. al heelwat navorsing gedoen op die gebied van die verwekking van atoomkrag deur n suspensie van uraan-oksied in swaarwater. Ook hier beveel die Raad op Atoomkrag aan dat die Regering n ooreenkoms aangaan vir samewerking.

Hierdie Memo word slegs vir die inligting van Ministers gesirkuleer. Konsep ooreenkomste sal later aan die Kabinet voorgelê word.

Cabinet Memorandum

Research in the area of Nuclear Energy and the Exchange of Information with Friendly Nations: Concluding of Friendship Treaties.

As known to the Ministers, the Union through the Atomic Energy Board, signed a contract with the Combined Development Agency, consisting of the Atomic Energy Commission of the United States of America and the Atomic Energy Authority of Great Britain, to deliver +/- 5000 tons of uranium oxide over the next 10 years which at the current average price will amount to GBP40,000,000 in foreign currency for South Africa. The Treasury will not just earn the revenue on the profit but the State will earn direct income of GBP250,000 per year from the sale of uranium oxide. Without going into more detail with regards to the advantages of this industry, it is acknowledged that this is truly an important industry.

For the Ministers' information, the following:

PAYMENTS AND RETURNS FROM URANIUM: □□□

□□□□

Financial Year

Paid to Mines

Paid to Treasury

TOTAL □□□

□□□□

1952 / 53

327,897 - 9 - 6

2,889 - 10 - 6

330,787 - 0 - 0 □□□

□□□□

1953 / 54

4,858,473 - 3 - 9

34,571 - 6 - 0

4,893,044 - 9 - 9. □□□

□□□□

1954 / 55

15,114,538 - 0 - 6

97,755 - 17 - 3

15,212,093 - 17- 9. □□□

□□□□

1955 / 56

31,051,685 - 11 - 4

184,784 - 4 - 0

31,236,469 - 15 - 3? □□□

□□□□

GBP51,352,594 - 5 - 1

GBP319,800 - 17 - 9

GBP51,672-395- 2-10 □□ □□

Thus far South Africa was solely concerned with the production and marketing of uranium oxide and because South Africa is one of the largest producers, the Union received quite a notable status internationally. With production only South Africa will not be able to maintain its position.

Since President Eisenhower's historic declaration of "Atoms for Peace" and the Geneva Conference the imagination of human kind has been seized by the peacefulcivil uses of atomic energy. Although the Americans, the English and the

Russians are in comparison far ahead with regards to research...illegible...every country of importance is busy spending huge sums of money on research, notwithstanding the danger that research work may be duplicated or outdated soon. Even a small nation like Norway is busy with its own Nuclear Energy Research Program. It is clear that South Africa cannot lag behind in this field.

According to a report by one of the members of the Atomic Energy Board who visited the USA recently, the USA has already engaged in concluding friendship treaties for co-operation with 27 countries. The chairperson of the American Atomic Energy Commission expressed his disappointment to our Ambassador in Washington that such an agreement with South Africa is not in place yet. The Americans are eager to assist South Africa but according to their Atomic Energy Act they are not allowed to provide as much as 1 milligram Uranium²³⁵ to South Africa unless there is an agreement between the USA and the Union. Furthermore the Americans view such an agreement as the first step to further co-operation in nuclear energy and even possible financial assistance with regards to the building of a nuclear reactor in South Africa. Our representatives were told that the USA is willing to provide half to a maximum of \$350,000 for an experimental reactor that might be built in South Africa. There are no conditions attached to this offer. The gift of \$350,000 may, if accepted, be used towards any means as decided by the Atomic Energy Board, even for the erection of a building at the reactor acquired by other means.

The Atomic Energy Board has already drafted a concept agreement that will be submitted to the Ministers shortly and it is highly recommended that such an agreement be entered into with the United States of America.

With regards to a reactor, the Atomic Energy Board appointed a Research Advisory Committee with Dr H.J. van Eck as chairperson, who is currently preparing a research program for the Atomic Energy Board. Until the program is drafted it is unclear if the cordial offer of the USA should be accepted at this stage.

The Government of Great Britain and the Atomic Energy Authority of England indicated on several occasions that they are willing to provide confidential information to South Africa regarding the peace time uses of nuclear energy as well as the production of heavy water. The English is insisting that South Africa must undertake a decisive research program, after which they will be willing to place at South Africa's disposal all available information wrt such a program. This offer is also subject to the condition that South Africa concludes a Friendship Treaty for the co-operation to peaceful use of nuclear energy with England. The Atomic Energy Board is of the opinion that an agreement should be reached without delay as our students currently studying in England do not have the same access to information as students from countries with an already existing agreement. It is important that all available information be gathered to ensure that work is not being done on problems that America and England already found solutions to. The Atomic Energy Board already drafted an agreement which will be submitted for approval to the Ministers shortly.

The Government of the Netherlands unofficially enquired if the Union will be interested in co-operating with the Netherlands in connection with the peaceful uses of nuclear energy. Although the Netherlands is not a producer of uranium, they already have established a large research program on nuclear energy. The Netherlands has eg done quite a lot of research in the area of generating nuclear energy through the suspension of uranium in heavy water. Here also the Atomic Energy Board recommends that the Government enters into an agreement wrt co-operation.

This Memo is only circulated for the information of the Ministers. Concept agreements will be submitted to the Cabinet at a later stage.