



Fondation "Partager le Savoir"
Sharing Knowledge Foundation

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Chairman
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Dear Members of the IASS Supervisory Board,

Thank you for having invited me to present my opinion on your policy before I step down because of my disagreement with your policy. First some common sense remarks.

The first five years of the IASS project were remarkably productive thanks to the role of two outstanding personalities. Klaus Töpfer as Executive Director succeeded in getting hold of the building in which you sit, a relic of the DDR where one can still see the safes in the basement. The coffers were empty but he did succeed in getting a substantial budget from the German government and he also appointed Carlo Rubbia as his Scientific Director. Rubbia is a rare combination of a Physicist whose expertise remains at the forefront of fundamental physics, but is also endowed with a strong inclination and capability in engineering and technology. He took his role at IASS as being the project leader of a dedicated group of fellows, collaborating with CERN, with Karlsruhe and other German and European institutions. He developed half a dozen projects of great importance for sustainable development of the Earth System in limiting the emission of CO₂. Of all these, the one that stands out loud and clear, as high as the Eiffel Tower in the sky of Paris is the Project to transport without losses GWatts of Electrical Power over distances of hundreds of kilometres. The main motivation for this is that energy sources are generally located far from where people live. This is an old idea but the breakthrough came because of the availability of MgB₂ opening the door to transform a niche product into a world transforming asset.

For the simple minded people in the street, the Mantra would be *You don't change a winning team*. But, since the issue of the review by the Federal Panel of the five year project appeared negative, Mark Lawrence was apparently led to propose a very radical approach: Let us fire the two old bosses and appoint fresh blood to implement a new policy. Why would that be? Where the two senior bosses senile? Let's be serious! Conceivably, this could have been done in stages. Rubbia asked to be extended as Director for four years in order to complete the R&D of the transport project, in collaboration with CERN, since all the multiple difficulties had been identified and could be tested and resolved. He was instead offered the position of an adviser, a completely unrealistic proposition since he would not have had the authority to fight the daily difficulties coming from the dithering of the Treasury and the BMFT. Quoting his political duties as Italian Senator and his activities as a Physicist, he therefore decided to turn the page of his five extraordinary years and resign his position at IASS. None of us knew what his next step would be. We now know.

In January 2016, the Chinese government awarded Rubbia the International Scientific and Technological Cooperation Award, the highest award bestowed to a Foreign National. Rubbia was presented with the award by President Xi Jinping and Premier Li Keqiang. We also

learned that he was appointed Director of an Institute for Sustainable Development within the Chinese University of Mining Technology (CUMT) situated at Xinzhou, in the province of Iuandsou, about 600 km North East of Beijing where the coal powering the electric generators in Beijing originates.

I did some research about the activities of CUMT and its project 211. They are charged with modernising the mining activities, in order to reduce the casualties, including developing in situ gasification of coal. They also build, advanced coal burning electrical generator with high efficiency (eg Supercritical with 44% thermal efficiency. The institute of Sustainable Energy, headed by Rubbia's main research focus is on zero emission energy systems, energy storage systems, and transmitting electric power over long distances using super conductors. The Communiqué goes on to list Rubbia as former DG of CERN, former head of INFN, Doctor Honoris Causa of the Chinese Academy etc., a long list that does include “ *has held several positions on energy advisory boards, including the United Nations Economic Commission for Latin America, and the Institute for Advanced Sustainability Studies in Potsdam, Germany.* ” There is no mention of his former role as Scientific Director of IASS, which after all is factually correct as of 2016 (but, could have been otherwise if he would have remained Director which he was denied).

The Blue Print is now crystal clear and it is very likely that it will succeed because of the high priority it enjoys from the highest level of the Chinese Government. The R&D effort will receive all the necessary support during the 4 years projected to 2020. In parallel a trench will be dug alongside the railway linking CMUT with Beijing Electrical generators will be built at the site of the mine. It is fair to expect that in 6 years, say in 2022, the last electrical generator powered by coal in Beijing, the capital of the Country with the largest population and the largest economy in the world I will be phased out. And then this most polluted city will enjoy clear skies. The world media will celebrate it and rightly so because it will be a great accomplishment showing what technology can accomplish to, make the world a better place!

In fact, I could imagine that cleaning the pollution in Beijing could qualify Rubbia for a Nobel Peace Prize. It has happened in the past that a scientist is awarded the Peace Prize, Think of Norman Borlaug in 1970 who initiated the Green Revolution and therefore saved millions of people from Mexico, India and Pakistan from predicted starvation. Imagine that IASS could have been the source of this if Rubbia had been allowed to finish what he had started during his years as Director. The Chinese had the problem of pollution, similar to the one that plagued Pittsburgh. Imagine what triumph it would have been for IASS, a minuscule institution in the enormous German scientific enterprise to have succeeded in providing a means to clean the air of Beijing the capital of the most populated country in the world. This alone would have justified *a posteriori* the creation of IASS if a more visionary approach would have been taken. Alas, it has not happened and the same bureaucrats who advised you to fire Rubbia will now become angry at you for not having told them of the interest showed by China. And that sadly will seal the fate of IASS.

Thank you for listening and I am of course ready to answer your questions.