Industrial EMP Solutions

CIVILIAN CRITICAL INFRASTRUCTURE PROTECTION

Attention to:

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Dear Mr. D. A. Moran,

Thank you for your reply and for the materials you sent.

A few words about myself.

My work experience includes many years of work in the defense industry, as well as in an energy company for about 25 years, in which I began to deal with the problem of protecting the electric power industry from EMP. That is, I know the electrical equipment and problems of the electric power industry well from the inside, and therefore I have developed EMP protection products specifically designed for the electric power industry.

I have described my experience in my books:

As a fairly experienced specialist, I would like to express my comments and remarks on the situation with the protection of the U.S. electric power industry from EMP. I hope you will take these comments of mine positively, as my desire to solve a problem that was 50 years ago.

1. I fully agree with you that it is much more effective to build new protected power facilities than to protect old ones. There is no doubt about it. But what is the percentage of new substations and power plants in the U.S.? What is the rate of replacement of old substations and power plants with new ones? I think you know the answers to these questions much better than I do. So, what do you do with existing (old) power facilities?

2. I completely agree with you that today there are many means of protecting electrical equipment from EMP on the market, including transformers protection. But then the question arises: why have the country's power grids remained unprotected from EMP for more than 50 years?

3. So-called "green" or "clean" energy sources with powerful inverters is not a replacement for existing transformers, but only a supplement to them. In addition, semiconductor inverters controlled by dozens of microprocessors are not the most EMP-resistant devices.

4. As for the waveforms for the pulse shapes of E1, E2 and E3, they were well studied even before this topic was declassified 50 years ago. In the very first, then still secret reports, the waveforms were given. Today, these reports are 60-70 years old. Today, there are many dozens of reports from such world-famous research centers as: Lawrence Livermore National Laboratory, Oak Ridge National Laboratory, Idaho National Laboratory, Sandia National Laboratories, Metatech Corp., EPRI and many other. There are also many military and civilian standards on the subject. With rare exceptions (such as MIL-STD-2169B. High-Altitude Electromagnetic Pulse (HEMP) Environment, DoD, 2012), all of them are available in the public domain. Such kind of theoretical research was very important for understanding the essence of EMP 50-70 years ago. But today, in my opinion, we need a practical technical solution suitable for practical use in power grids. But where are these solutions? Do you know them? If so, why don't we see them anywhere and don't hear anything about them? And we read only: "*we need for further research*" for tens of millions of dollars.

5. Don't you think it's strange that 70 years after the discovery of the EMP effect, the U.S. electric power industry (as well as the rest of the world) remains unprotected? What is the reason for this? In the absence of theoretical data? No. In the absence of protective means and equipment on the market? No. Is there no need for such protection? No. In the absence of standards? No (only the International Electrotechnical Commission - IEC has issued 22 standards with recommendations on this topic). So, what's the problem?

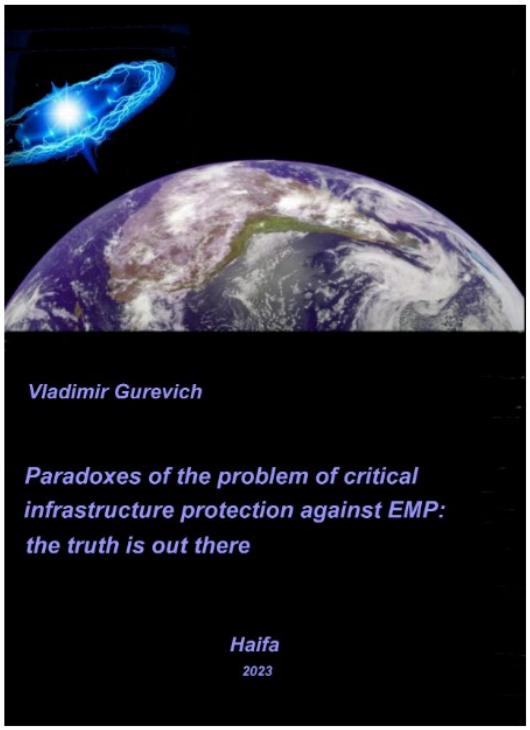
6. There are three big problems:

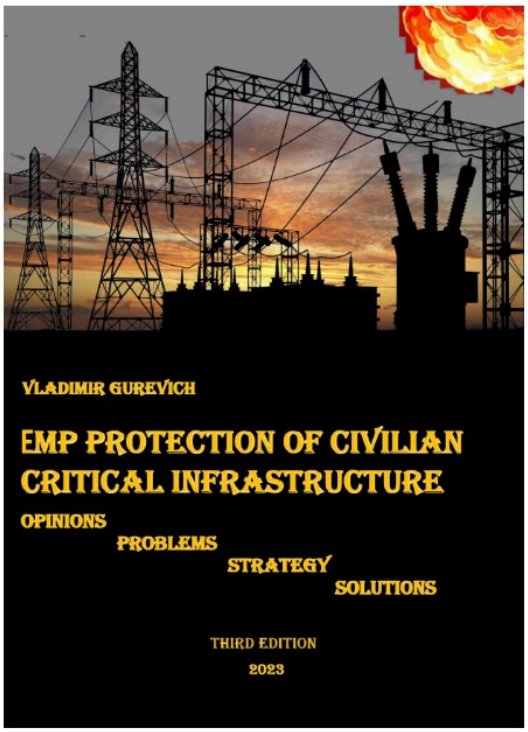
   - a huge number of fakes about the achievements of many organizations in protecting critical infrastructure from EMP;

   - a huge number of organizations that receive money from the state budget and are interested in supporting this problem "afloat".

   - erroneous wrong strategy in the protection of civilian infrastructure and attempts to apply military means of protection and military standards to protect civilian infrastructure.

     A detailed analysis of these problems is given in my works:





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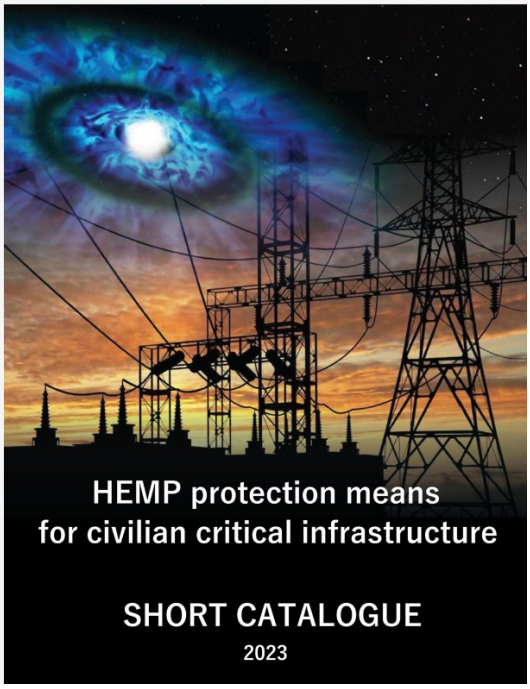
Are you and your organization interested in a real, practical solution to the problem, rather than additional lectures, articles, presentations?

If your answer is "yes", then you can provide invaluable assistance in organizing the production of new protective equipment, which I have developed specifically for the protection of electrical equipment of civilian infrastructure. Prototypes have been successfully operating for several years in real conditions at substations.

A short catalogue of these products can be found here:



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Now I'm looking for a sponsor. Do you want to be such a sponsor?

Best regards,

Dr. Vladimir Gurevich,
CEO Industrial EMP Solutions

NOTE: You can use this letter of mine quite freely, as you wish.

October 27, 2027