

**CDM Executive board
UNFCCC .Secretariat**

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*Expansion of applicability of AMS -111.AJ
"Recovery and recycling of material from solid wastes"
Honorable Executives of the CDM Board*

Dear Madam, Dear Sirs

Call for public inputs

Pakkon (www.Pakkon.net) is the Persian word for "clean", meaning Iranian Environmental Mechanism. The Iranian company is coming from the traditional green movement in Europe and so has its origin in methodology and the mentality of reducing Emission beside energy saving and material recovery, climate mitigation options benefits of recycling tires to substitute for virgin materials as opposed to other life options (e.g. combusting of scrap tires to fuel cement production).The process in Iran is based on tires recycling and recovery, by production of end materials such as TPE (Thermoplastic elastomer) as well as Thermoplastic Polyurethane which you may call it TPE- replacements.

I. Different project and various material types under AMS-III.AJ.

Due to differences in energy use for production of plastic products based on recycled material and from virgin input versus, which is an effective way of greenhouse gas reduction, at the same time a wise circleable ecological approach from Iran, in which the Environmental and care of mother Earth process are growing up. In other word, material substitution is a potential "fuel/feed stock switch". This is not just an intellectual theory, but the nowadays life describe and dictated us to make a short roll back from wasting Energy and Material, using ruined machines, production process technology, back toward the power saving, material recovery. That is what we understand as a wise circulating economy.

The obligation to be within 200 Km rang of plant and source of material (virgin and waste), is not relevant in our waste rubber recycling project, on the other side our system has as well mobile shredder, thus to secure the input even from every corner of the Iran. Like all modern Thermoplastic production plant, we recover 100% steel and textile out of scrap tires, using CDM – Hybrid – CHP – solar. All of these are substitute for virgin production, causing GHG prevention. * See footnote 1 & 2 for Energy / Gases.

II - for the equivalence of recycled and virgin Stoff, refer to: material recycling vs. Co-incineration in cement kilns, 2009 A as well as: Material recycling in asphalt and artificial vs. Civil engineering in application for drainage layers in landfills, 2009 B.

- Material recovery of Asphalt using particle with 80% fine fractious < 1mm
 - Shredder of tires as a source of energy and iron in current kilns. The statements are coming from an independent researcher team coming from Heidelberg – Germany and CRI; Force Technology based as 14044 and 14040 Standards. As many researchers had demonstrated, recycling waste tires do substituting virgin rubber and steel are meaningful to both the civil engineering and Co-incineration path methods. Thus burning a used tire in cement kilns will produces approximately 9 Kw equivalence heat energy, while manufacturing the same tire, will cost ca.69kw Energy. The second aspect is that, recycling the used tires to earn (e.g.) TPE/TPU will bring further environmental benefit.

The 3.rd aspect is the reduction of gas of greenhouse emission, if the waste is recycled, in place of burning it in kilns. We hope we are helped to launch the CDM protect by getting right signals from UNFCCC and related industry worldwide. See footnote 1 & 2

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footnote 1 & 2

Heat Equivalence	Needed Energy	Researches from PAKKON.NET
34 – 38 MJ/kg	150 - 50 MJ/kg	cachou
	5,25 kwh/kg	Compounding cachou
	3,32 kwh/kg	Production of rubber flour
	2.1 kwh/kg	Energy needed for particle size 0/5 – 1/5 mm
	4,0 kwh/kg	TPE Granule
	7.5 tone	N ₂ O ₂
		Steel from waste rubber car's tires 25% of total production
		Textile material 5% of total production
Total production rubber flour and thermoplastic elastomer = 2 1000 tone / year		

Without recycling material	Researches from PAKKON.NET
Input materials	11,3 % = 0,047 kg SO ₂ /4,6 kg (K*)
Rubber flour production	+ 1,6 % = 0,0006 kg SO ₂ /4,6 kg (K*)
Transportation	0,060 kg SO ₂ /4,6 kg (K*)
With 30% recycling material	
Input materials	7,91 % = 0,0298 kg SO ₂ /4,6 kg (K*)
Rubber flour production	+ 1,12 % = 0,0042 kg SO ₂ /4,6 kg (K*)
Transportation	+ 1,9 % = 0,0070 kg SO ₂ /4,6 kg (K*) 0,0410 kg SO ₂ /4,6 kg (K*)

(K*) cachou