08/12/1, 11.

The Global Surplus Heat is entirely flowing into Arctic where "Ticking Time Bombs "(thermally unstable methan clathrate of 400G ton)are setted (Part Ⅱ).

A heat flows from high temperatuer into lower one <2nd Low of Thermo-Dynamics>

❶Global temperature rise by radiative forcing by 10Gton of CH4 release.

❷The global temperature rise and the possibiility of explosive CH4 release causing into thermal hell ?!:

❶Global temperature rise by radiative forcing by 10Gton of CH4 release:

The atmosphere currently contains about 3.5 Gton C as methane. An instantaneous release of 10 Gton C would kick us up past 6 ppm. This is probably an order of magnitude larger than any of the catastrophes that anyone has proposed.

☞:red undeline is by author.

<http://www.realclimate.org/index.php/archives/2005/12/methane-hydrates-and-global-warming/>=describing methan concentration=c and the radiative forcing arise=ΔF(c), which acts on rising global temperature T.

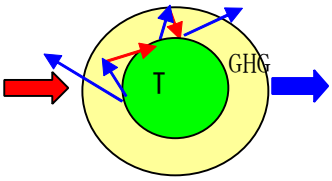
(1)Then you coud see radiative forcing rise by $1W/m^2$ due to 10Gton release.

$\delta(\Delta F)=1W/m^2$.

(2)<<generalized Stefan-Boltzmann low>>

$\pi R^2 F_0(1-m)/(1-b)=4\pi R^2 \sigma_0 T^4$.

<<input power=output power>>



$F_0=1366W/m^2$=original solar heat input.

$R_E=6.38X10^6m$=Earth radius,

m=albedo(≒0.4)=reflection(by white clouds, ice sheets)probability for F_0.

b(≒0.48)=1-a、a=passing probability of cooling radiation through GHG.

σ_0=<Stefan Boltzmann=$5.67X10^{-8}Wm^{-2}K^{-4}$.>constant in pseudo cavity radiation.

T(=273+15)℃=global mean temperature on the surface.

(a)solar input energy＝cooling radiation one:

$F_0(1-m)/(1-b)=4\sigma_0 T^4$. <$F_0$＝1366W/m²:solar constant>

(b)**radiative force**≡ΔF≡puturbation caused by "albedo m & b of GHG".

$4\sigma_0 T^4=F_0(1-m)/(1-b)\equiv F_P+\Delta F$. <$F_P\equiv 4\sigma_0 T_P^4=1538W/m^2$. ($T_P$＝273+14℃ in 1800y).

☞:above definition is my own,but not might be that of IPCC ?.

Hence if not correct,following discussion in (c)... might be entirely false !!.

$\Delta F=\underline{F_0(1-m)/(1-b)}-\underline{F_P}=1366(1-0.4)/(1-0.48)-1538=38W/m^2$.

present value　　preindustrial value.

(c)Global temperature variation=δT caused by that of δ(ΔF).

(b)→ $\delta T/T=\delta(\Delta F)/4\Delta F$.

$\delta T/(273+15)=\delta(\Delta F)/4\Delta F=(1W/m^2)/4(38W/m^2)$. → $\delta T=1.9℃$.

This value is catastrophic,since arctic T rise would be over 3 times.

Is it really ??!!.Reader should find mistakes and tell author,please !!.

(d)supplement(?) of above mentioned (c).

Wikipedia indicates linear response of $\delta T=\lambda\,\delta(\Delta F)$

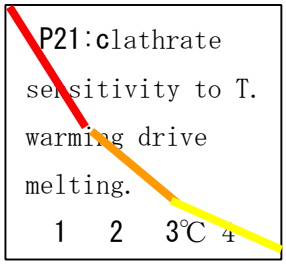
<http://en.wikipedia.org/wiki/Radiative_forcing>:Radiative forcing estimates surface temperature rise by the force via the equation with λ the climate sensitivity . A typical value is 0.8 giving 3℃ for doubling of CO_2.

❷The global temperature rise and the possibiility of explosive CH4 release causing into thermal hell ?!:

Landslides release maybe a gigaton and pockmark explosions considerably less. Permafrost hydrates are melting, but no one thinks they are going to explode all at once.<http://www.realclimate.org/index.php/archives/2005/12/methane-hydrates-and-global-warming/>.

They said that no one thinks .....,however,no one had proved it.

(1)Here is notable fact that the distribution of methan clathrate reservoir is concentrated in depth of between 200m and 2000m.
<http://ioc3.unesco.org/oanet/Symposium2004/Symp04ppts/archer.pdf>P21.
Note that temperature sensitivity of melting MC is/ 500Gt highest at lower temperture side.The rate is 2500Gt/1.5℃ ＝1670Gt/℃＝10Gt/0.06℃. Then note 10Gt instantly push δT＝1.9℃ of global surface temperature.Then problem is temperature diffusion velocity in underwater.**In anyhow,once such positive feedback had realized,none could stop anymore.**



(2)If thermal flow increasing in under water is **sychronous** in global with regard to sea depth,then it would become dangerous,would'nt it?.

<http://www.lophelia.org/pdf/Paleoceanography_Frank.pdf>
☞:Thermal propagation under sea surface is faster than our previous view. 2000m may be within a decade.Because any calm sea flor never evade dairy tide flows which cause tremendous small eddies at anywhere due to fulid dynamics nature,which may enhance thermal flow diffusion.Global temperature 1.9℃ rise would cause intensive hurricane and typhoon stiring sea water.It is also certain that heat flows at sea flor may be enormously absorbed by hudge ocean heat capacity.Then problem is the speed of temperature diffusion.
☞:As for fulid dynamics,see this site <http://www.777true.com/easyFD.pdf>.

⑶**Singular problem of shallow sea flor reservoir of methan clathrate in Arctic:**

Singular Arctic Ocean was a lot surrounded by continents like a big pond where many rivers flow into.Ofcourse hudge amount of biochemical compounds may has been accumulating there,where **400Gton methan clathrate** is said to be reserved.

The average depth of the Arctic Ocean is only **1,300 m** (4,300 ft) because of the vast shallow expanses on the **continental shelves**. The deepest point in the Arctic Ocean is 5,450 m (17,880 ft).
<http://encarta.msn.com/encyclopedia_761562552/arctic_ocean.html>

⑷Such shallow continetal shelves may reserve 400Gton methan.

⑸And also this year had realized north pole comeplete ice melting,that is, they had throwned their precious heat guarding hat and direct solar ray is to penetrate into black sea flors.

⑹In this way,we could not help to recognize too much vulnerability of Arctic where might become triggering point of thermall and poison gass hell of earth.

⑺By anyhow,we could not help make desicive strategy for drastic cutting CO2 off. Perhaps the cutting rate may be 80%. Certainly it would become no more normal. The concreat ways entirely depend on your ideas.

☞:An idea is that all the people shoud equally become semi-jobless with global 3 or 4 holidays **the regime almost without fuel energy**.Then you must entirely forget capitalism the competitive,but ridiculous extravagancy and vanity **causing own extinction**.

See website<http://www.777true.com/GREATCHANCE.pdf>